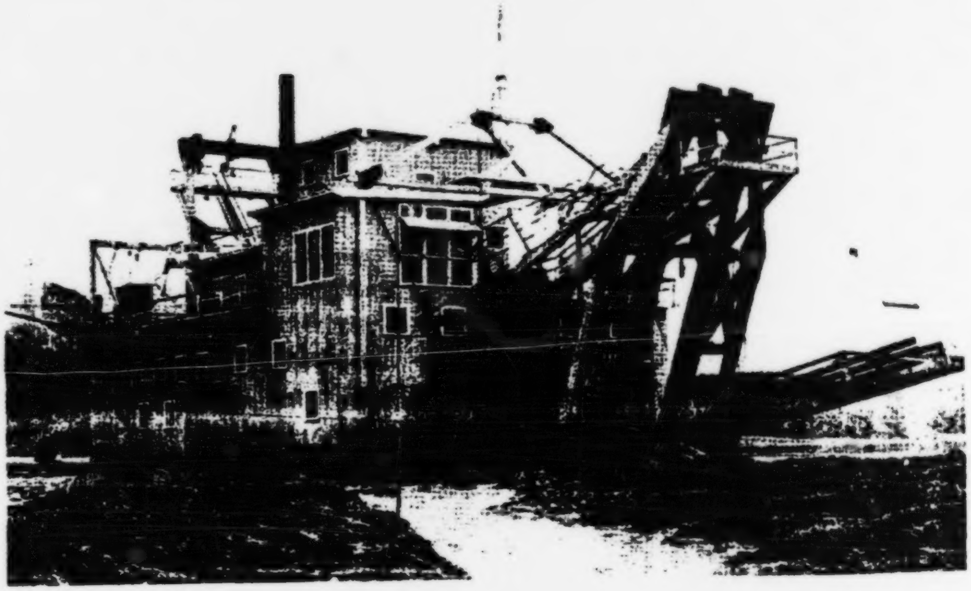
YUKON MINERAL INDUSTRY
1941 to 1959



A synthesis of previously unpublished information
concerning Yukon's mineral industry
precious metal production from placer gold dredges and
underground silver mines.

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YUKON
MINERAL INDUSTRY
1941 to 1959

Compiled and edited by
R.L. Debicki

TABLE OF CONTENTS

CHAPTER 1 MINERAL INDUSTRY OF YUKON, 1941 to 1959 1
  INTRODUCTION 1
  CLAIM STAKING AND MINERAL PRODUCTION 2
    TABLE 1 STATUS OF LODE CLAIMS, 1941 to 1959 3
    TABLE 2 NUMBERS OF ANALYSES DONE BY TERRITORIAL ASSAY OFFICE REFLECT PROSPECTING ACTIVITY 4
    TABLE 3 PRODUCTION AT TREADWELL YUKON GOLD CORP., AND ITS SUCCESSOR UNITED KENO HILL MINES, LIMITED, 1941 to 1959 4
    TABLE 4 STATUS OF PLACER CLAIMS, 1941 to 1959 5
    TABLE 5 STATUS OF PROSPECTING LEASES, 1941 to 1959 6
    TABLE 6 CREEKS ON WHICH THERE WERE PLACER LEASES IN GOOD STANDING, 1935 to 1944 7
    TABLE 7 PLACER GOLD PRODUCTION ACCORDING TO ROYALTIES PAID 9
    TABLE 8 GOLD PRODUCTION (FINE TROY OUNCES) ON WHICH ASSISTANCE WAS PAID UNDER THE EMERGENCY GOLD MINING ASSISTANCE ACT 10
    FIGURE 1 NEW LODE CLAIMS STAKED BETWEEN 1940 AND 1959 13
    FIGURE 2 PRODUCTION AT TREADWELL YUKON GOLD CORPORATION LIMITED AND ITS SUCCESSOR UNITED KENO HILL MINES LIMITED, 1940 to 1959 13
    FIGURE 3 NEW PLACER CLAIMS STAKED BETWEEN 1940 to 1959 13
    FIGURE 4 PLACER CLAIMS IN GOOD STANDING ON MARCH 31st, AT THE END OF THE FISCAL YEAR BETWEEN 1940 AND 1959 13
    FIGURE 5 MILES OF PROSPECTING LEASES IN GOOD STANDING ON MARCH 31 AT THE END OF THE FISCAL YEAR BETWEEN 1940 AND 1959 13
    FIGURE 6 PLACER GOLD PRODUCTION IN TROY OUNCES ACCORDING TO ROYALTIES PAID 13
    PLATE 1 YUKON CONSOLIDATED GOLD CORPORATION THAWING PLANT ON LOWER HUNKER CREEK 15
    PLATE 2 POINT IN THAWING GROUND 15
    PLATE 3 YUKON CONSOLIDATED GOLD CORPORATION DREDGE #1 ON LOWER HUNKER CREEK 15
    PLATE 4 YUKON PLACER MINING COMPANY 3.75 CUBIC-FOOT BUCKET-LINE DREDGE AT GLACIER CREEK 15
    PLATE 5 THICK SECTION OF GRAVEL BEING MINED AT DUBLIN GULCH BY F. TAYLOR 15
    PLATE 6 IVOR NORBECK AT HIS SLUICE BOX ON TEMPERANCE HILL, HUNKER CREEK 15
CHAPTER 2 MINERAL INDUSTRY OF YUKON, 1941 16
  INTRODUCTION 16
  LODE MINING 16
    DAWSON DISTRICT 16
    MAYO DISTRICT 16
      Treadwell Yukon Corporation, Limited 16
      Other Lode Operations 16
      Assay Office 17
    WHITEHORSE DISTRICT 17
  PLACER MINING 17
    DAWSON DISTRICT 17
      The Yukon Consolidated Gold Corporation, Limited 17
        Property 17
        Power Generation and Transmission 17
        Hydraulic Stripping 17
        Cold Water Thawing 18
        Dredging 19
        Production 19
        Construction and Capital Expenditure 19
        Shops and Transportation 20
        Prospect Drilling 20
        Employment 20
        Miscellaneous Expenditures 21
        General 21
      Holbrook Dredging Company 21
      Clear Creek Placers, Limited 21
      Canadian Tungsten Limited 21
      Other Placer Operations 21
    MAYO DISTRICT 22
      Haggart Mining Company 22
      Fred Taylor 22
      Vilhelm Lunde 22
      Other Placer Operations 22
    WHITEHORSE DISTRICT 23
CHAPTER 3 MINERAL INDUSTRY OF YUKON, 1942 24
  INTRODUCTION 24

LODE MINING 24
DAWSON DISTRICT 24
MAYO DISTRICT 24
Treadwell Yukon Corporation, Limited 24
Other Lode Operations 24
WHITEHORSE DISTRICT 24
PLACER MINING 25
DAWSON DISTRICT 25
The Yukon Consolidated Gold Corporation, Limited 25
Property 25
Power Generation and Transmission 25
Hydraulic Stripping 25
Thawing 26
Dredges 26
Production 27
Construction and Capital Expenditure 27
Shops and Transportation 27
Prospect Drilling 27
Reserves 27
Employment 27
Miscellaneous Expenditures 28
The Holbrook Dredging Company 28
Clear Creek Placers, Limited 28
Other Placer Operations 28
MAYO DISTRICT 28
Haggart Mining Company 28
Fred Taylor 29
Vilhelm Lunde 29
Hugo Seaholm 29
Other Placer Operations 29
WHITEHORSE DISTRICT 29
CHAPTER 4 MINERAL INDUSTRY OF YUKON, 1943 30
INTRODUCTION 30
LODE MINING 30
DAWSON DISTRICT 30
MAYO DISTRICT 30
Assay Office 30
WHITEHORSE DISTRICT 30
PLACER MINING 31
DAWSON DISTRICT 31
Yukon Consolidated Gold Corporation, Limited 31
Power Generation and Transmission 31
Hydraulic Stripping 31
Cold Water Thawing 32
Bonanza Creek Hydraulic Thawing 32
Dredging 32
Production 32
Shops and Transportation 32
Employment 33
Miscellaneous Expenditures 33
The Holbrook Dredging Company 33
Clear Creek Placers, Limited 33
Other Placer Operations 33
MAYO DISTRICT 33
WHITEHORSE DISTRICT 33
CHAPTER 5 MINERAL INDUSTRY OF YUKON, 1944 33
-INTRODUCTION 35
LODE MINING 35
Assay Office 35
PLACER MINING 35
DAWSON DISTRICT 35
Yukon Consolidated Gold Corporation, Limited 35
Property 35
Power Generation and Transmission 35
Hydraulic Stripping 35
Cold Water Thawing 36
Dredging 36
Production 36
Shops and Transportation 36

Employment 36
Miscellaneous Expenditures 36
Clear Creek Placers, Limited 37
Other Placer Operations 37
MAYO DISTRICT 37
WHITEHORSE DISTRICT 37
CHAPTER 6 MINERAL INDUSTRY OF YUKON, 1945 38
INTRODUCTION 38
LODE MINING 38
Assay Office 38
PLACER MINING 38
DAWSON DISTRICT 38
Yukon Consolidated Gold Corporation, Limited 38
Property 38
Power Generation and Transmission 39
Hydraulic Stripping 39
Cold Water Thawing 39
Dredging 39
Production 40
Shops and Transportation 40
Employment 40
Miscellaneous Expenditures 40
Other Placer Operations 40
MAYO DISTRICT 40
WHITEHORSE DISTRICT 40
CHAPTER 7 MINERAL INDUSTRY OF YUKON, 1946 41
INTRODUCTION 41
LODE MINING 41
DAWSON DISTRICT 41
MAYO DISTRICT 41
Assay Office 41
WHITEHORSE DISTRICT 41
PLACER MINING 42
DAWSON DISTRICT 42
Yukon Consolidated Gold Corporation, Limited 42
Property 42
Power Generation and Transmission 42
Hydraulic Stripping 42
Cold Water Thawing 42
Dredging 43
Production 43
Shops and Transportation 43
Employment 43
Miscellaneous Expenditures 44
Yukon Explorations Limited 44
Yukon Gold Placers, Limited 44
Clear Creek Placers, Limited 44
Other Placer Operations 44
MAYO DISTRICT 44
WHITEHORSE DISTRICT 44
CHAPTER 8 MINERAL INDUSTRY OF YUKON, 1947 46
INTRODUCTION 46
LODE MINING 46
DAWSON DISTRICT 46
MAYO DISTRICT 46
United Keno Hill Mines, Limited 46
Mayo Mines Limited 46
Yukon Northwest Explorations Limited 46
Other Lode Operations 46
Assay Office 47
WHITEHORSE DISTRICT 47
PLACER MINING 47
DAWSON DISTRICT 48
Yukon Consolidated Gold Corporation, Limited 48
Property 48
Power Generation and Transmission 48
Hydraulic Stripping 48
Cold Water Thawing 49

Dredging 49
Production 49
Construction 49
Shops and Transportation 49
Employment 49
Prospect Drilling 50
Miscellaneous Expenditures 50
Yukon Explorations, Limited 50
Yukon Gold Placers, Limited 50
Clear Creek Placers, Limited 50
Other Placer Operations 51
MAYO DISTRICT 51
WHITEHORSE DISTRICT 51
CHAPTER 9 MINERAL INDUSTRY OF YUKON, 1948 52
INTRODUCTION 52
LODE MINING 52
DAWSON DISTRICT 52
MAYO DISTRICT 52
United Keno Hill Mines, Limited 52
Other Lode Operations 52
Assay Office 53
WHITEHORSE DISTRICT 53
Western Ranges Prospecting Syndicate 53
Noranda Mines Limited 54
Great Northern Exploration Company, Inc 54
Hudson Bay Exploration and Development Company, Limited 54
Yukon Coal Company Limited 54
Yukon Canyon Gold Limited 54
PLACER MINING 54
DAWSON DISTRICT 55
Yukon Consolidated Gold Corporation, Limited 55
Property 55
Power Generation and Transmission 55
Hydraulic Stripping 55
Cold Water Thawing 56
Dredging 56
Dragline Mining 56
Production 57
Shops and Transportation 57
Employment 57
Prospect Drilling 57
Miscellaneous Expenditures 57
Yukon Exploration Limited 57
Mechanical and Hydrawlic Stripping 57
Cold Water Thawing 57
Dredging 58
Production 58
Clear Creek Placers, Limited 58
Yukon Gold Placers, Limited 58
Other Placer Operators 59
MAYO DISTRICT 59
WHITEHORSE DISTRICT 59
CHAPTER 10 MINERAL INDUSTRY OF YUKON, 1949 60
INTRODUCTION 60
LODE MINING 60
DAWSON DISTRICT 60
MAYO DISTRICT 60
United Keno Hill Mines, Limited 60
Other Lode Operations 61
Assay Office 61
WHITEHORSE DISTRICT 61
PLACER MINING 61
DAWSON DISTRICT 62
Yukon Consolidated Gold Corporation, Limited 62
Property 62
Power Generation and Transmission 62
Hydraulic Stripping 62
Cold Water Thawing 63
Dredging 63

Production 63
Shops and Transportation 63
Employment 64
Prospect Drilling 64
Miscellaneous Expenditures 64
Yukon Placer Mining Company 64
Clear Creek Placers, Limited 64
Yukon Gold Placers, Limited 64
Other Placer Operations 65
MAYO DISTRICT 65
WHITEHORSE DISTRICT 65
CHAPTER 11 MINERAL INDUSTRY OF YUKON, 1950 67
INTRODUCTION 67
LODE MINING 67
DAWSON DISTRICT 67
MAYO DISTRICT 67
United Keno Hill Mines, Limited 67
Other Lode Operations 67
Assay Office 68
WHITEHORSE DISTRICT 68
PLACER MINING 68
DAWSON DISTRICT 68
Yukon Consolidated Gold Corporation, Limited 69
Property 69
Power Generation and Transmission 69
Hydraulic Stripping 69
Cold Water Thawing 69
Dredging 70
Production 70
Shops and Transportation 70
Reserves 70
Employment 70
Miscellaneous Expenditures 70
Yukon Placer Mining Company 70
Clear Creek Placer Mines, Limited 70
Yukon Gold Placers, Limited 71
Other Placer Operations 71
MAYO DISTRICT 72
WHITEHORSE DISTRICT 72
CHAPTER 12 MINERAL INDUSTRY OF YUKON, 1951 73
INTRODUCTION 73
LODE MINING 73
DAWSON DISTRICT 73
MAYO DISTRICT 73
Ankeno Mines, Limited 74
Bellekeno Mines, Limited 74
Brewis Red Lake Mines, Limited 74
Comstock Keno Mines, Limited 74
Jersey Yukon Mines, Limited 74
Klondike-Keno Mines, Limited 74
Lustre Yukon Mines, Limited 74
Mackeno Mines, Limited 74
Mayo Mines, Limited 75
Mount Keno Mines, Limited 75
No Cash Lead and Silver Mines, Limited 75
United Keno Hill Mines, Limited 75
Yukeno Mines, Limited 76
Assay Office 76
WHITEHORSE DISTRICT 76
Hudson Bay Exploration and Development Company, Limited 76
Noranda Mines, Limited 76
Other Lode Operations 76
PLACER MINING 78
DAWSON DISTRICT 78
Yukon Consolidated Gold Corporation, Limited 78
Property 78
Power Generation and Transmission 78
Hydraulic Stripping 79
Cold Water Thawing 79

Dredging 79
Production 80
Shops and Transportation 80
Prospect Drilling 80
Reserves 80
Employment 80
Miscellaneous Expenditures 80
Yukon Placer Mining Company 80
Clear Creek Placer Mines, Limited 81
Yukon Gold Placers, Limited 81
Other Placer Operations 81
MAYO DISTRICT 82
WHITEHORSE DISTRICT 82
CHAPTER 13 MINERAL INDUSTRY OF YUKON, 1952 83
INTRODUCTION 83
MINERAL PRODUCTION 83
LODE MINING 83
DAWSON DISTRICT 83
MAYO DISTRICT 83
Ankeno Mines, Limited 84
Bellekeno Mines, Limited 84
Comstock Keno Mines, Limited 84
Hoyle Mining Company 84
Jersey Yukon Mines, Limited 84
Klondike Keno Mines, Limited 84
Lustre Yukon Mines, Limited 84
Mackeno Mines, Limited 84
Mayo Mines, Limited 84
Mount Keno Mines, Limited 84
United Keno Hill Mines, Limited 85
Yukeno Mines, Limited 85
WHITEHORSE DISTRICT 85
Hudson Bay Exploration and Development Company, Limited 85
Prospectors Airways, Limited 85
Conwest Exploration Company, Limited 86
Jersey-Yukon Mines, Limited 86
Yukon Exploration and Development Company, Limited 86
Other Lode Operations 86
PLACER MINING 86
DAWSON DISTRICT 86
Yukon Consolidated Gold Corporation, Limited 87
Property 87
Power Generation and Transmission 87
Hydraulic Stripping 87
Cold Water Thawing 87
Dredging 87
Hydraulic Mining 88
Production 88
Shops and Transportation 88
Employment 88
Miscellaneous Expenditures 88
Yukon Placer Mining Company 88
Clear Creek Placers, Limited 88
Yukon Gold Placers, Limited 89
Other Placer Operations 89
MAYO DISTRICT 89
WHITEHORSE DISTRICT 90
CHAPTER 14 MINERAL INDUSTRY OF YUKON, 1953 90
INTRODUCTION 92
MINERAL PRODUCTION 92
LODE MINING 92
DAWSON DISTRICT 92
MAYO DISTRICT 92
Ankeno Mines, Limited 92
Beaver River Silver-Lead Mines Limited 93
Bellekeno Mines, Limited 93
Comstock Keno Mines, Limited 93
Jersey Yukon Mines, Limited 93
Klondike Keno Mines, Limited 93
.... 93

Mackeno Mines, Limited........ 93
Mount Keno Mines, Limited........ 93
United Keno Hill Mines, Limited........ 93
Yukeno Mines, Limited........ 94
Other Lode Operations........ 94
WHITEHORSE DISTRICT........ 94
Hudson Bay Exploration and Development Company, Limited........ 94
Prospectors Airways, Limited........ 94
Other Lode Operations........ 94
PLACER MINING........ 94
DAWSON DISTRICT........ 95
Yukon Consolidated Gold Corporation, Limited........ 95
Yukon Placer Mining Company........ 95
Clear Creek Placers, Limited........ 95
Yukon Gold Placers, Limited........ 95
Other Placer Operations........ 95
MAYO DISTRICT........ 97
WHITEHORSE DISTRICT........ 97
CHAPTER 15 MINERAL INDUSTRY OF YUKON, 1954........ 98
INTRODUCTION........ 98
MINERAL PRODUCTION........ 98
LODE MINING........ 98
DAWSON DISTRICT........ 98
MAYO DISTRICT........ 98
Ankeno Mining, Limited........ 99
Bellekeno Mines, Limited........ 99
Comstock Keno Mines, Limited........ 99
Klondike Keno Mines, Limited........ 99
Mackeno Mines, Limited........ 99
Mount Keno Mines, Limited........ 99
United Keno Hill Mines, Limited........ 99
Yukeno Mines, Limited........ 100
Other Lode Operations........ 100
WHITEHORSE DISTRICT........ 100
PLACER MINING........ 101
DAWSON DISTRICT........ 101
Yukon Consolidated Gold Corporation, Limited........ 101
Property........ 101
Power Generation and Transmission........ 101
Hydraulic Stripping........ 101
Cold Water Thawing........ 101
Dredging........ 102
Hydraulic Mining........ 102
Production........ 102
Shops and Transportation........ 102
Employment........ 102
Miscellaneous Expenditures........ 103
Yukon Placer Mining Company........ 103
Clear Creek Placers, Limited........ 103
Yukon Gold Placers, Limited........ 103
Other Placer Operations........ 103
MAYO DISTRICT........ 104
WHITEHORSE DISTRICT........ 105
CHAPTER 16 MINERAL INDUSTRY OF YUKON, 1955........ 106
INTRODUCTION........ 106
LODE MINING........ 106
DAWSON DISTRICT........ 106
MAYO DISTRICT........ 106
Mackeno Mines, Limited........ 107
Mount Keno Mines, Limited........ 107
United Keno Hill, Limited........ 107
Other Lode Operations........ 108
WHITEHORSE DISTRICT........ 108
PLACER MINING........ 109
DAWSON DISTRICT........ 109
Yukon Consolidated Gold Corporation, Limited........ 109
Yukon Placer Mining Company........ 109
Clear Creek Placers, Limited........ 109
Yukon Gold Placers, Limited........ 109

Other Placer Operations 110
MAYO DISTRICT 111
WHITEHORSE DISTRICT 111
CHAPTER 17 MINERAL INDUSTRY OF YUKON, 1956 112
INTRODUCTION 112
LODE MINING 112
DAWSON DISTRICT 112
MAYO DISTRICT 113
Galkeno Mines, Limited 113
United Keno Hill Mines, Limited 113
Other Lode Operations 114
WHITEHORSE DISTRICT 115
PLACER MINING 115
DAWSON DISTRICT 115
Yukon Consolidated Gold Corporation, Limited 115
Yukon Placer Mining Company 115
Clear Creek Placers, Limited 115
Yukon Gold Placers, Limited 115
Other Placer Operations 116
MAYO DISTRICT 117
WHITEHORSE DISTRICT 117
CHAPTER 18 MINERAL INDUSTRY OF YUKON, 1957 118
INTRODUCTION 118
LODE MINING 118
DAWSON DISTRICT 118
MAYO DISTRICT 119
Galkeno Mines, Limited 119
United Keno Hill Mines, Limited 119
Other Lode Operations 120
WHITEHORSE DISTRICT 121
PLACER MINING 121
DAWSON DISTRICT 121
Yukon Consolidated Gold Corporation, Limited 121
Yukon Placer Mining Company 122
Clear Creek Placers, Limited 122
Yukon Gold Placers, Limited 122
Other Placer Operations 122
MAYO DISTRICT 123
WHITEHORSE DISTRICT 123
CHAPTER 19 MINERAL INDUSTRY OF YUKON, 1958 125
INTRODUCTION 125
LODE MINING 125
DAWSON DISTRICT 125
MAYO DISTRICT 126
United Keno Hill Mines, Limited 126
Other Lode Operations 127
WHITEHORSE DISTRICT 128
PLACER MINING 128
DAWSON DISTRICT 128
Yukon Consolidated Gold Corporation, Limited 128
Yukon Placer Mining Company 128
Other Placer Operations 129
MAYO DISTRICT 130
WHITEHORSE DISTRICT 130
CHAPTER 20 MINERAL INDUSTRY OF YUKON, 1959 131
INTRODUCTION 131
LODE MINING 131
DAWSON DISTRICT 131
MAYO DISTRICT 131
United Keno Hill Mines, Limited 132
Other Lode Operations 133
WHITEHORSE DISTRICT 133
PLACER MINING 134
DAWSON DISTRICT 134
Yukon Consolidated Gold Corporation, Limited 134
Yukon Placer Mining Company 134
Other Placer Operations 134
MAYO DISTRICT 135
WHITEHORSE DISTRICT 136

CHAPTER I.

MINERAL INDUSTRY OF YUKON, 1941 to 1959

INTRODUCTION

This report was prepared to provide published information on the lode and placer mining industries in Yukon during an important part of its history. Mining and milling of Elsa and Keno Hill silver-lead ores was begun. Significant nickel, copper, lead, and zinc deposits were discovered in the White River, Vangorda Creek, and MacMillan Pass areas. Asbestos deposits, which were ultimately mined by Cassiar Asbestos Corp. were discovered. Placer mining activity continued, although pressures in the form of rising costs, and stable gold prices were forcing the industry into decline. Both the lode and placer mining industries were affected during the war years by shortages of men and equipment, although there was a great deal of attention paid to sources of tungsten, a strategic mineral.

No general reports have been published previously covering the lode and placer mining industries from 1941 to 1959, although studies of individual deposits or mining operations have been released by a number of sources. Overviews of the mineral industry were published as Memoirs of the Geological Survey of Canada between 1934 and 1940, ending with Memoir 234 in 1940. They were begun again by the Geological Survey of Canada in 1960 with Paper 61-23, and have been prepared since 1969 by Geology Section of Department of Indian Affairs and Northern Development.

The availability of information on the period of 1941 to 1959 in public, but not published form was brought to the attention of Geology Section, D.I.A.N.D. by Dr. C.F. Gleeson of Ottawa. George Gilbert of D.I.A.N.D. Whitehorse located more information in the Yukon Archives. Ruth Debicki of D.I.A.N.D. Whitehorse located additional information at the Yukon Archives, Yukon Goverment Records Centre, and Department of Indian Affairs and Northern Development, Ottawa and compiled this report. Most of the information came from Yukon Archives Section RG 91, volume 66, file 3525, parts 6 and 7, and section RG 81/115, volumes 1, 2, 3, and 4. Additional information may be available in public records such as land assessment rolls, lapsed mineral claim records, etc., but it was beyond the scope of this compilation to search it out. Information compiled here is sometimes very general concerning location. Further searching by interested individuals may provide more exact locations for the mineral occurrences or mining operations of interest.

Information from Government of Yukon Records technically covered by a thirty year period of confidentiality is published here with permission of Doug Bell, Commissioner of Yukon.

Most of the information in this report was compiled from reports by Mining Recorders of the day to the Comptroller or Commissioner, reports from the Comptroller, or after 1948 the Commissioner, to his supervisors in Ottawa, and limited government correspondence with mining companies. The sources of information for each year are listed in the introduction to each section.

Records were not complete. A brief look at their history might explain why. About 1950, boxes of central registry files stored in the attic of Government House in Dawson were taken to the dump because of a shortage of storage space. When the capital of the Territory, and the government, moved from Dawson to Whitehorse in 1953, some central registry records were left behind. They were neglected until 1959 when the Public Archives of Canada sent an archivist to go through the files. Some were shipped to the Public Archives in Ottawa. Some may have been destroyed in a warehouse fire in the 1960's. In 1968, some of the files still in storage in Dawson, and some of the files that had been brought to Whitehorse in 1953 were organized and transferred to the Public Archives of Canada where they were re-organized and integrated with files transferred in 1959. The files were microfilmed, and originals were returned to the Yukon Archives when it opened in 1972. More recent records are held by the Yukon Government Central Registry Office Records Centre.

Production figures, numbers of claims recorded, etc. given in the text were reported in the sources according to government fiscal years, i.e. April 1st to the following March 31st. Production figures reported by companies were usually compiled according to the calendar year. Where published in the text, the "year" is noted if different from the government fiscal year.

Photos are courtesy of the Geological Survey of Canada, and Yukon Archives.

All units of measurement have been left as reported. One M.I.D., a measurement used when describing the volumes of water used for hydraulic stripping in preparation for placer mining, is equivalent to 2,274 cubic feet of water, or 14,162 Imperial gallons of water.

Where more than one source provides the same information, the most recent information is assumed to be correct and is included here, as it is based on the most complete information. All gold production figures are described as crude or fine ounces whenever possible; if not specified the type of gold is not known. Where gold production figures are available from reports on the Emergency Gold Mining Assistance Act, they are used in preference to royalty records as a source of production because they are reported in fine rather than crude troy ounces, and because they reflect the amount of gold recovered in the year, and not the amount of gold sold.

The Emergency Gold Mining Assistance Act came into effect in 1948, and continued through 1959. A complex formula was used to determine assistance for gold mines which produced more than 50 fine ounces of gold per year, in an attempt to offset increasing production costs, and stable gold prices. An upper limit was placed on the amount of assistance which could be provided; for example in 1957 it was $12.33

per ounce. Applicants for assistance were obliged to sell their gold to the Royal Canadian Mint or other approved facility for assaying, refining, and storing, and were not able to sell it on the open market. A summary of Yukon production on which assistance was paid between 1948 and 1959 is in Table 8.

CLAIM STAKING AND MINERAL PRODUCTION

The following tables summarize available claim staking, claim status, and mineral production figures for 1941 to 1959. Where sufficient information is available, the data are also presented graphically (see Figures 1 to 6). Gaps indicate an absence of information for that year. Dashed lines indicated that the data for that year are incomplete.

TABLE 1

STATUS OF LODE CLAIMS, 1941 to 1959

YEAR	*	MINING DISTRICT			TOTAL
		Dawson	Mayo	Whitehorse	
1941	N	20	23	-	-
	R	101	340	-	-
	G	-	405	-	-
	I	-	-	-	-
	L	-	131	-	131
1942	N	11	-	-	-
	R	109	-	-	-
	G	-	338	-	-
	I	-	-	-	-
	L	-	132	-	132
1943	N	36	-	11	-
	R	104	274	15	393
	G	-	-	26	-
	I	-	-	-	-
	L	-	132	-	132
1944	N	77	52	92	221
	R	144	258	19	421
	G	-	-	-	-
	I	-	-	-	-
	L	-	132	-	132
1945	N	185	77	36	298
	R	209	308	64	581
	G	-	-	-	-
	I	-	-	-	-
	L	-	-	-	-
1946	N	427	195	204	826
	R	279	409	86	774
	G	-	-	-	-
	I	-	-	-	-
	L	-	150	-	-
1947	N	432	118	512	1,062
	R	77	362	527	966
	G	-	-	-	-
	I	-	-	-	-
	L	-	143	-	-
1948	N	-	260	122	-
	R	-	507	237	-
	G	46	-	-	-
	I	-	-	-	-
	L	-	145	-	-
1949	N	22	361	61	441
	R	37	618	267	922
	G	59	-	-	-
	I	-	-	-	-
	L	-	136	-	-
1950	N	-	-	152	-
	R	-	-	167	-
	G	62	1,762	-	-
	I	-	-	-	-
	L	-	160	-	-
1951	N	64	-	467	-
	R	34	-	249	-
	G	98	2,161	-	-
	I	-	-	-	-
	L	-	165	7	-
1952	N	65	210	1,354	1,629
	R	32	1,414	689	2,135
	G	-	1,644	-	-
	I	-	-	-	-
	L	-	164	-	-
1953	N	-	62	3,989	-
	R	63	1,008	1,284	2,355
	G	130	1,626	-	-
	I	-	-	-	-
	L	-	166	-	-
1954	N	46	384	1,800	2,230
	R	84	1,109	2,849	4,042
	G	160	1,981	-	-
	I	-	-	-	-
	L	-	184	-	-
1955	N	320	257	2,127	2,704
	R	67	1,092	3.062	4,221
	G	374	1,474	-	-
	I	-	-	-	-
	L	-	213	-	-
1956	N	219	215	818	1,252
	R	125	551	1,862	2,530
	G	346	1,380	-	-
	I	-	-	-	-
	L	-	257	-	-
1957	N	360	95	430	885
	R	208	457	510	1,175
	G	577	1,324	-	-
	I	-	-	-	-
	L	-	307	-	-
1958	N	110	53	599	762
	R	450	448	484	1,382
	G	478	1,113	-	-
	I	-	32	-	-
	L	-	391	-	-
1959	N	6	89	659	754
	R	-	455	63	-
	G	234	1,039	-	-
	I	-	0	-	-
	L	-	447	-	-

* N new claims recorded during fiscal year
R claims renewed during fiscal year
G claims in good standing on March 31st, at end of fiscal year
I iron leases in good standing at end of fiscal year
L quartz leases in good standing at end of fiscal year
- no data available

TABLE 2

NUMBERS OF ANALYSES DONE BY TERRITORIAL ASSAY OFFICE REFLECT PROSPECTING ACTIVITY

					Element analyzed							Total	Total
Year	Pb	Zn	Ag & Au	Fe	Cu	Sb	Mo	Sn	W	Si	other	Samples	Analyses
1941	649	0	1,098	0	4	0	0	0	1	0	0	1,098	1,757
1942	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	508	22	1,073	5	9	3	1	3	43	4	4	1,073	1,675
1944	474	13	936	0	8	0	0	0	0	0	0	936	1,451
1945	287	13	998	0	10	0	0	0	0	0	1	998	1,309
1946	303	10	851	0	14	0	0	0	0	0	1	851	1,179
1947	479	20	1,080	1	13	1	2	0	0	0	0	1,080	1,596
1948	502	50	902	0	68	1	2	0	0	0	0	902	1,525
1949	226	61	1,393	0	9	5	1	0	0	0	0	1,393	1,695
1950	224	43	637	0	4	4	0	1	0	0	0	637	913
1951	247	59	1,502	0	8	7	0	0	0	0	0	1,502	1,823
1952	494	13	936	0	8	0	0	0	0	0	0	936	1,451
1953	287	13	998	0	10	0	0	0	0	0	1	998	1,309
1954	303	10	851	0	14	0	0	0	0	0	1	851	1,179
1955	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-

Pb	lead	Sb	antimony	Au	gold	W	tungsten
Zn	zinc	Mo	molybdenum	Fe	iron	Si	silicon
Ag	silver	Sn	tin	Cu	copper	-	no data available

TABLE 3

PRODUCTION AT TREADWELL YUKON GOLD CORP. LTD., AND ITS SUCCESSOR UNITED KENO HILL MINES, LIMITED, 1941 to 1959

Year	ore mined (tons)	concentrate (tons)	lead (pounds)	zinc (pounds)	silver (ounces)	cadmium (pounds)
1941	23,369	2,129	-	-	-	-
1942	0	0	0	0	0	0
1943	0	0	0	0	0	0
1944	0	0	0	0	0	0
1945	0	0	0	0	0	0
1946	-	-	-	-	-	-
1947	-	3,662	-	-	-	-
1948	42,198	7,266	5,203,179	-	1,961,871	-
1949	32,567	7,538	5,699,500 (e)	2,818,750 (e)	1,603,250 (e)	-
1950	77,670	14,705	13,916,231	7,040,569	3,349,848	80,585
1951 (*)	94,846	14,715	13,024,537	7,617,270	3,579,188	100,561
1952 (*)	138,863	24,161	19,645,618	13,579,219	4,769,574	184,984
1953	159,218	41,632	31,073,986	26,848,603	5,987,650	347,965
1954	175,653	41,144	28,055,194	26,054,544	6,002,070	311,076
1955	155,754	42,503	26,038,000	24,228,588	5,702,205	301,301
1956	159,404	38,906.62	23,570,998	20,912,678	5,614,077	288,034
1957	165,746	35,082.63	22,729,582	18,914,215	5,737,284	236,906
1958	174,540	34,284.49	23,377,311	18,709,331	6,866,756	228,082
1959	176,860	30,738.53	22,024,197	15,281,540	7,189,373	189,758

e figures are estimated
* 1951 and 1952 are likely for calendar year, other years are for fiscal year ending March 31st.
- no data available

TABLE 4

STATUS OF PLACER CLAIMS, 1941 to 1959

YEAR	*	MINING DISTRICT			TOTAL
		Dawson	Mayo	Whitehorse	
1941	N	98	41	16	155
	R	2,332	96	33	2,461
	G	2,430	137	49	2,616
1942	N	142	8	1	151
	R	2,416	128	21	2,565
	G	2,558	136	22	2,716
1943	N	89	1	3	93
	R	2,409	100	22	2,531
	G	2,498	101	25	2,624
1944	N	123	6	41	170
	R	2,449	87	19	2,555
	G	2,572	93	60	2,725
1945	N	-	6	81	-
	R	-	99	39	-
	G	2,509	105	120	2,734
1946	N	-	6	31	-
	R	-	126	41	-
	G	2,463	132	72	2,667
1947	N	93	4	54	151
	R	2,448	54	73	2,575
	G	2,541	58	127	2,726
1948	N	-	3	28	-
	R	-	92	92	-
	G	2,446	95	120	2,661
1949	N	-	3	9	-
	R	-	95	99	-
	G	1,861	98	108	2,067
1950	N	-	-	31	-
	R	-	-	89	-
	G	1,004	98	120	1,222
1951	N	-	-	10	-
	R	-	-	69	-
	G	-	-	-	-
1952	N	36	2	9	47
	R	966	67	66	1,099
	G	-	79	-	-
1953	N	92+	1	8	-
	R	1,358+	72	72	-
	G	-	78	-	-
1954	N	121	2	24	147
	R	689	76	82	847
	G	-	95	-	-
1955	N	22	10	9	41
	R	486	67	58	611
	G	1,824	79	-	-
1956	N	39	3	12	54
	R	437	74	50	561
	G	1,596	79	-	-
1957	N	16	3	45	64
	R	404	79	70	553
	G	1,262	79	-	-
1958	N	42	4	11	57
	R	1,989	72	89	2,150
	G	1,223	86	-	-
1959	N	-	5	10	-
	R	-	62	118	-
	G	1,277	72	-	-

* N new claims recorded during the fiscal year, including restaked claims
R claims renewed during fiscal year
G claims in good standing on March 31st, at end of fiscal year
- no data available
+ calendar year, not fiscal year

TABLE 5

STATUS OF PROSPECTING LEASES, 1941 to 1959

YEAR	*	MINING DISTRICT			TOTAL	YEAR	*	MINING DISTRICT			TOTAL
		Dawson	Mayo	Whitehorse				Dawson	Mayo	Whitehorse	
1941	#	-	-	-	-	1951	#	-	-	19	-
	mi	-	-	-	-		mi	-	-	48	-
1942	#	-	-	-	60	1952	#	-	-	18	-
	mi	-	-	2	108		mi	-	-	46	-
1943	#	-	-	-	57	1953	#	-	-	-	-
	mi	95	14	39	148		mi	-	-	42	-
1944	#	-	-	-	100	1954	#	-	-	49	-
	mi	263	13	46	322		mi	-	-	-	-
1945	#	-	-	-	-	1955	#	-	-	20	-
	mi	342	26	157	525		mi	-	-	49	-
1946	#	-	-	-	-	1956	#	-	-	10	-
	mi	275	12	159	446		mi	-	-	14	-
1947	#	41	1	25	-	1957	#	-	-	-	-
	mi	113	1	65	179		mi	-	-	-	-
1948	#	-	-	27	-	1958	#	-	-	-	-
	mi	84	16	71	171		mi	-	-	-	-
1949	#	-	-	26	-	1959	#	-	-	16	-
	mi	93	8	80.5	181.5		mi	-	-	29	-
1950	#	-	-	14	-						
	mi	81	19	31	131						

* # number of leases
mi total distance (in miles) covered by leases

TABLE 6

CREEKS ON WHICH THERE WERE PLACER LEASES IN GOOD STANDING, 1935 to 1944.

Part of this table covers a period outside that covered by this report, but the data are included here as there is no other published report of activity on some of the creeks. Some creek names may have changed since the reports from which they were compiled (reports by G.A. Jeckell, Comptroller, to the Director, Lands, North-West Territories and Yukon Branch, Department of the Interior) were written.

Creek	Year									
	'35	'36	'37	'38	'39	'40	'41	'42	'43	'44
Alder						X			X	
All Gold		X	X	X		X				
Anderson		X								
Angus										X
Ballarat					X	X	X	X	X	X
Ballarat Fork							X			
Barker				X	X	X	X	X	X	X
Barlow		X	X		X	X	X	X	X	
Bates									X	X
Bear (Fortymile area)										X
Bedrock				X		X	X			
Beloud (Bates Lake area)						X				
Big Gold				X			X	X		X
Black Hills			X	X	X	X	X	X	X	X
Borden										X
Boucher (Sixtymile area)										X
Brewer						X				
Brittania				X	X	X	X	X	X	X
Burwash					X	X	X			X
Bullion	X	X	X	X	X					
California					X	X	X			X
Canadian		X	X	X	X	X	X	X	X	X
Casino							X			
Clear	X	X	X	X	X	X	X			X
Cottoneva	X									
Discovery Pup (Nansen Creek area)		X								
Dublin Gulch		X	X	X	X	X	X	X		
Duncan		X	X	X	X	X	X			X
Eleven Pup (Henderson Creek area)				X			X	X		
Elsie (White River area)					X					
Ermeline (Left Fork, Henderson Creek area)						X				
Eureka			X							
Famous (Tagish Lake area)		X								
Ferguson			X							
Flat										X
Fortymile						X	X			
Four Mile Gulch (Minto Creek area)						X	X			
Fourth of July	X									
Gay Gulch										X
Geary		X	X	X						
Glacier			X							
Gladstone					X				X	X
Goat									X	
Gold Bottom				X					X	X
Granite	X									
Goring					X	X	X	X	X	
Green Gulch		X		X						
Haggart			X	X	X	X	X		X	X
Henderson						X				
Hidden (Beaver Creek area)										X
Highet				X		X	X	X	X	X
Hunker				X				X	X	
Indian										X

TABLE 6 (con't.)

Creek	Year									
	'35	'36	'37	'38	'39	'40	'41	'42	'43	'44
Iron	X						X	X	X	
Iron Rust						X				
Jacks (Kluane Lake area)		X								
Johnson						X	X	X	X	
Kirkman		X	X				X	X	X	X
Lake	X									
Lapie		X								
Left Fork Henderson										X
Lightning							X			
Little Gold				X	X	X	X	X	X	X
Little Twelve Mile					X					
Little Violet	X									
Livingstone	X	X			X				X	X
Lynx						X	X			
Maisy May										X
Mariposa									X	X
Matson										X
McIntyre							X			
McLaggan (Minto Creek area)										X
McNeill (Duncan Creek area)							X			
McQuesten River		X								
Minto										X
Moose (Fortymile River area)	X	X	X	X	X	X	X	X		X
Nansen					X	X	X			
"Near Koidern River"										X
"Near White River"										X
Ninemile						X				
No. 8 Pup (Brittania Creek area)					X					
Nodine (Moose Creek area)							X			
Nugget Gulch						X				
Olive Pup (Dublin Gulch area)							X			
O'Neill Gulch									X	
Pan					X		X	X	X	
Poker					X					
Portland								X		
Quartz					X					
Roaring Fork							X			
Rosebud						X	X			
Rosebute										X
Ruby			X	X						
Scheelite							X			
Scroggie							X	X	X	X
Scurvey			X							
Secret						X	X			
Selwyn					X		X			
Selwyn River			X	X						
Sheep			X							
Shootanook (Liard River area)			X							
Shorty				X		X				X
Silver (Tatshenshini River area)		X	X							
Sixtymile		X	X	X	X	X	X			
Skookum Pup (Black Hills Creek area)								X	X	X
South Rosebud										X
Squaw					X	X				X
Stevens (Scroggie Creek area)										X
Summit	X									
Swede							X			
Tagish	X									
Tatamagouche					X					
Ten Mile				X	X	X	X			X
Thistle					X	X	X	X	X	X

TABLE 6 (con't.)

Creek	'35	'36	'37	'38	'39	'40	'41	'42	'43	'44
Thunder Gulch						X	X	X	X	
Twelfth of July	X		X							X
Twelve Mile					X	X				
Twentyseven Pup (Gold Run Creek area)						X				
Victoria				X		X				X
Walhalla							X	X	X	X
Zinc		X					X	X	X	

TABLE 7

PLACER GOLD PRODUCTION ACCORDING TO ROYALTIES PAID

Year	MINING DISTRICT Dawson troy ounces	Mayo troy ounces	Whitehorse troy ounces	Y.C.G.C.* % of total	Total troy ounces
1941	83,959.48	2,550.75	932.37	69	87,442.60
1942	102,570.61	2,218.00	642.28	70	105,430.89
1943	52,141.22	530.50	181.86	65	52,853.58
1944	28,988.46	272.00	150.88	71	29,411.34
1945	38,764.50	303.75	981.74	76	40,049.99
1946	54,233.18	609.75	2,229.55	84	57,162.48
1947	54,850.31	484.00	4,152.55	64	59,486.86
1948	71,433.13	598.75	4,090.60	63	76,132.48
1949	102,369.62	0	2,488.25	56	104,857.87
1950	116,578.70	0	966.30	57	117,545.00
1951	76,833.0	0	1,173.43	67	78,006.43
1952	-	-	2,817.00	57	98,150 (a)
1953	-	1,059.0	4,038.75	47	82,600 (a)
1954	-	2,750.1	2,835.00	53	102,765 (a)
1955	84,525.0	5,124.9	1,745.57	55	91,395.47
1956	83,065.0	4,280.6	1,070.4	53	88,416.0
1957	89,004.4	2,193.2	1,635.8	60	92,833.4
1958	80,336.9	1,015.6	2,608.2	65	83,960.7
1959	77,704.9	2,880.2	4,467.5	61	85,052.6

Y.C.G.C.* Yukon Consolidated Gold Corporation
a approximate
- no data

TABLE 8

GOLD PRODUCTION (FINE TROY OUNCES) ON WHICH ASSISTANCE WAS PAID UNDER THE EMERGENCY GOLD MINING ASSISTANCE ACT

	1948	1949	1950	1951	1952
Ballarat Mines					602.373
Barker & Ray	262.271				
Bates Creek Placers	745.523				
Bedrock Mining Co.		582.734			
E.C. Beiler					
C.F. Boutillier		57.308			
H.C. & D.F. Boutillier	193.485	174.661	147.812	155.692	150.919
Bradbury, Cooper, & Adams	71.411	435.653	1,195.808	462.497	291.083
B. Bratsberg	561.231	504.588			
J. Bremner	198.062	219.266	150.318	90.241	138.895
G. Burgelman					
P.R. Burich		86.455			
Burwash Mining Co.	644.289	392.762	691.270	625.955	617.085
Caribou Creek Placers				293.492	253.030
Caribou Mining Co.					
J. Castonguay					
Clear Creek Placers	2,489.053	3,301.962	4,715.837	2,293.477	749.302
M.D. & L.D. Cole	347.544	584.815	575.080	561.380	
A. & A. Coulombe				191.499	224.134
Currie & Huley	55.660	128.067	395.965		
K. Djukastein					
Eureka Placers Ltd.					
Fant & Norbeck (Clear Creek)					
Fant & Norbeck (Hunker Creek)					
J. Feichtinger	143.951		78.336		79.268
Fry & Boyd					100.148
A. & D. Fry					
R.S. & J.A. Gould	154.945	219.394	91.354	185.656	147.159
C. Greig					
M. Huley			60.894		
Joiner & Morgan			212.303		
King & Winans		245.094	254.698		
Kluane Dredging Co.	1,546.659	1,310.340		237.990	1,530.361
P. LaCross					
LaCross & Rocjewicz					
O. Lunde					
M & S Placers					
McMillan & McMillan				190.959	
O. Medby	291.700				
Miller Creek Placers	1,564.833	1,153.415			
O. Moen					
Nelson			53.028		
Northern Placers (Adams Creek)					124.347
Northern Placers (Eldorado Creek)					77.021
Northern Placers (All Gold Creek)					
P.G. Placers					
P. Pamuchino	51.701	54.352	54.061		
Perret & LeSaux					
Reno Gold Mines		252.802			
L.M. Ross					
Sestak Placers Ltd.					
Scroggie Creek Placers					
Swanson & Watt				77.236	
F. Taylor	500.824				
Terra Mines Ltd.					
R. Troberg	238.539		152.114	179.118	281.703
Waddco Placers					
Yukon Consolidated Gold Corp.	47,537.911	59,445.329	66,545.706	51,603.159	56,542.662
Yukon Enterprises Ltd.					
Yukon Explorations Ltd.	1,390.723	4,141.112	5,230.295	6,801.324	8,139.182
Yukon Gold Placers (Henderson Creek)		5,596.869	4,262.463	3,939.442	2,987.728
Yukon Gold Placers (Thistle Creek)		1,439.362	2,808.965	1,111.039	799.933

TABLE 8

GOLD PRODUCTION (FINE TROY OUNCES) ON WHICH ASSISTANCE WAS PAID UNDER THE EMERGENCY GOLD MINING ASSISTANCE ACT

1953	1954	1955	1956	1957	1958	1959
998.981			1,481.368			3,330.949
						88.518
158.689	82.316	140.029	128.751	62.859	146.219	
189.249	52.559	103.858	92.082	50.237	270.788	150.323
						88.518
						145.258
1,338.229	499.196	442.905	724.882	1,003.748	1,334.019	953.235
		127.928				
64.240						
2,692.684	2,368.939	1,417.402				
	95.649	466.607	321.274			
113.608		57.363	64.651			
					248.314	
						276.020
			289.488	376.841	217.349	
						220.250
60.949						
154.427	62.448					
	165.707	161.224				
202.220		59.798	106.017	71.365	187.453	73.615
		147.756	123.341	123.129		248.633
1,903.368	1,645.472					
				288.945	322.989	
					306.442	
				122.380	176.763	69.190
333.983	500.597		248.966	299.151	284.684	
						210.257
774.733						
						51.853
172.001	1,046.945	1,156.187				
622.831						
			646.930			
			108.290		309.581	176.733
						80.077
				467.513	217.037	174.974
		222.310	837.013	475.742	223.431	
259.497	310.471	96.104				
549.177	366.859					
923.750	1,256.748					
102.431						
334.776	1,956.982		3,018.376	1,666.946		
43,736.020	54,304.480	48,740.323	48,871.626	57,411.124	55,547.309	53,646.984
						87.974
9,360.601	9,432.787	7,720.896	7,649.177	8,637.010	206.872	1,794.025
	3,995.732	3,308.572	2,545.924			

Figure 1. New lode claims staked between 1940 and 1959. The large number of claims staked in 1952, 1953, 1954, and 1955 resulted from the discovery of nickel-copper mineralization in the White River - Quill Creek area, and the discovery of asbestos in the Cassiar Creek area.

Figure 2. Production at Treadwell Yukon Gold Corporation Limited and its successor United Keno Hill Mines Limited, 1940 to 1959. There was no production from 1942 to 1945. No data is available for 1946.

Figure 3. New placer claims staked between 1940 and 1959. The decline in new staking over the period reflects economic troubles in the placer mining industry.

Figure 4. Placer claims in good standing on March 31st, at the end of the fiscal year between 1940 and 1959.

Figure 5. Miles of prospecting leases in good standing on March 31 at the end of the fiscal year between 1940 and 1959.

Figure 6. Placer gold production in troy ounces according to royalties paid. Data for 1952, 1953, and 1954 are not complete.

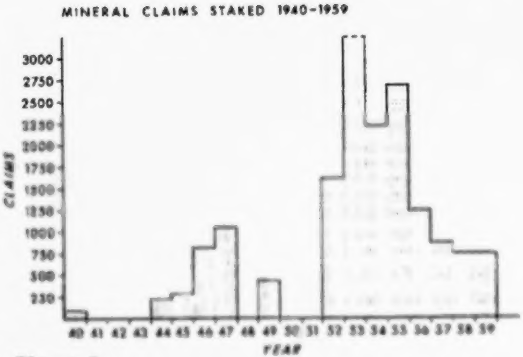

Figure 1.

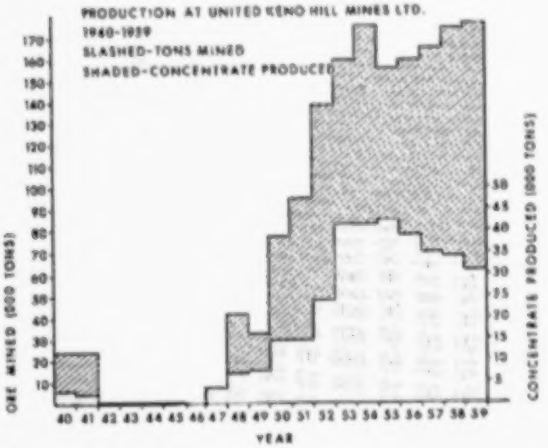

Figure 2.

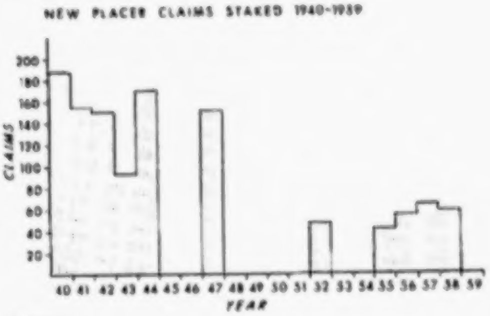

Figure 3.

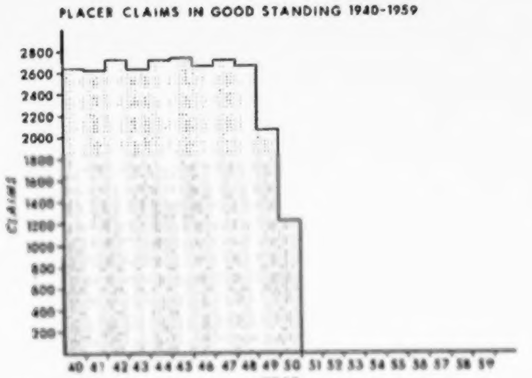

Figure 4.

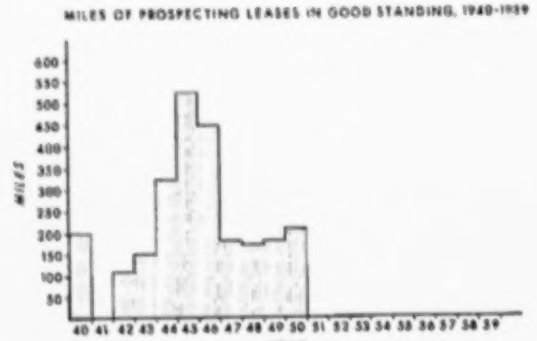

Figure 5.

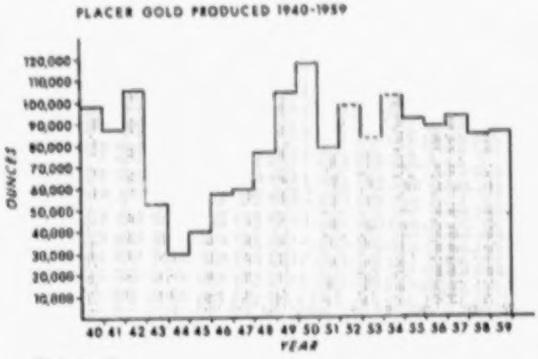

Figure 6.

Plate 1. Yukon Consolidated Gold Corporation thawing plant on lower Hunker Creek. Water was pumped through the points (vertical pipes) to thaw the ground.

Plate 2. Points in thawing ground. Depth of point indicates progress of thawing.

Plate 3. Yukon Consolidated Gold Corporation Dredge #1 on lower Hunker Creek.

Plate 4. Yukon Placer Mining Company 3.75 cubic-foot bucket-line dredge on Glacier Creek.

Plate 5. Thick section of gravel being mined at Dublin Gulch by F. Taylor. Depth to bedrock is 56 feet. Note man is center of photo for scale.

Plate 6. Ivor Norbeck at his sluice box on Temperance Hill, Hunker Creek. He is holding a hook to pull large rocks through the box. Note the use of punch-plate over riffles in the box.

Plate 1.

Plate 2.

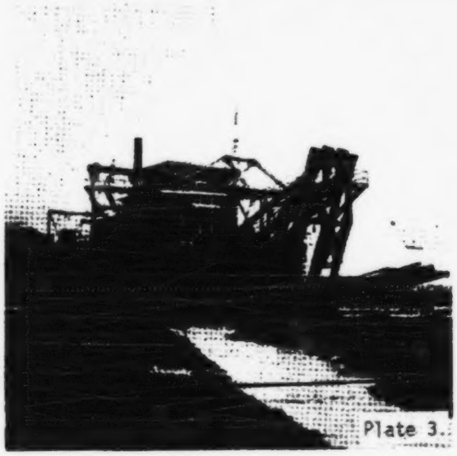
Plate 3.

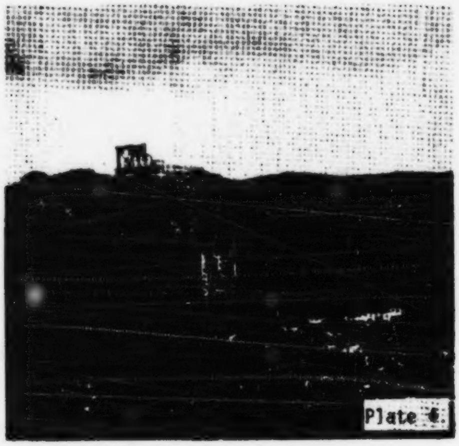
Plate 4.

Plate 5.

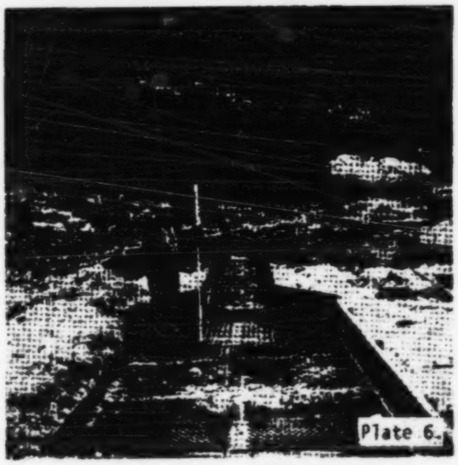
Plate 6.

CHAPTER 2.

MINERAL INDUSTRY OF YUKON, 1941

INTRODUCTION

Information on the mining industry in Yukon in 1941 was compiled from reports by G.A. Jeckell, Comptroller, and from correspondence of Treadwell Yukon Corporation, Limited, Holbrook Dredging Company, and Yukon Consolidated Gold Corporation.

LODE MINING

There was little prospecting activity in the territory during 1941. Assessment work was performed on properties in all three Mining Districts. Bulk sampling of one property was done in the Dawson District Mining was done intermittently at the Calumet Mine of Treadwell Yukon Corporation, and lay properties in the Elsa and Keno Hill areas, in the Mayo District. Total lode production in 1941 exceeded 850,000 troy ounces of silver, and 2,000,000 pounds of lead.

DAWSON DISTRICT

Twenty claims were staked in the Dawson District during the year, and one hundred and one claims were renewed.

The Pioneer Mining Company, Limited, of British Columbia secured an option on the property of the Lone Star Consolidated, and had their engineer on the ground during the summer of 1941. A bulk sample of twenty to thirty tons was shipped for a mill test. There was no information respecting results, but the Pioneer Mining Company retained their option on the property in 1942.

MAYO DISTRICT

There were four hundred and five claims in good standing in the Mayo District. Of these twenty-three were located during the year, and three hundred and forty were renewed. There were one hundred and thirty-one claims held under twenty-one year leases. Forty-two claims were exempt from assessment work.

Treadwell Yukon Corporation, Limited

On the first day of February 1941 the entire crew which had been employed in development work by the company was laid off and the mine closed down. At that time there was approximately nine months ore blocked out at the Calumet property. Mining operations commenced there on April 28, and continued until October 22. From that date until Dec. 12th a very small crew was kept on at salvage work and repairs to equipment. After that date, one man as watchman was left at the property. During 1941, 187 different men were employed at the mine.

The Treadwell Yukon Corporation offered all their property in the District for sale as a going concern. If no buyer could be found it was planned to dispose of assets to individual purchasers as they were found.

The ore mined in 1941 totalled 23,369 dry tons. Of this, 124 tons was sorted for shipment and the balance was milled. Concentrates recovered were 2,129 tons, and the amount shipped was 1,476 tons. At the end of 1941, 653 tons of concentrates and 136 tons of sorted ore, 12 tons of which was purchased, remained to be shipped.

The concentrates shipped contained 763,055 ounces of silver, and 1,552,162 pounds of lead, and had a market value of $359,282.50.

Ore shipped through Treadwell Yukon Corp. Ltd. by Messrs. Bacon and Beck totalled 61 dry tons. From it, 53,954 ounces of silver and 31,524 pounds lead, with a market value of $2 ,086.85 was produced.

Messrs. Settlemier and Bermingham shipped 174 dry tons of ore through the company. From it, 40,989 ounces of silver and 209,712 pounds of lead with a market value of $26,512.55 were produced.

During 1941, two lay agreements were let on company holdings. They were expected to produce a small amount of ore, possibly not more than 200 or 250 tons, during the 1942 shipping season. The first was a lay taken by Bacon and Brefalt on the "Elsa" and the second by Boon and Gustafson on the "Calumet". These claims both had small bodies of high grade shipping ore in sight.

Other Lode Operations

Another lay which was let and was expected to produce some shipping ore during 1942 was that taken by C.E. Fisher from James H. Mervyn on the "Dixie", a mineral claim situated in the vicinity of the "Elsa". Mr. Fisher had two men at work on the ground, early in 1942 and reported good promise of striking ore of a high enough grade to work.

A promising quartz prospect on a spur of Mt. Hinton which was discovered by Messrs. Brefalt and Erickson was temporarily abandoned in 1941. Mr. Brefalt worked on this ground with one man until early in the summer, and while assays from the property ran quite high in gold, ore could not be found in sufficient quantity to justify further work. The holders of the block of claims were continuing to keep them in good standing.

Mrs. A.J. Kensey and the Estate of Robert Fisher held a group of claims on Dublin Gulch which had indications of scheelite. The Treadwell Yukon Corporation did considerable exploration work on the claims during the summer of 1941 under the supervision of Mr. A.K. Schellinger. The work was abandoned as it was the opinion of the late Mr. Wernecke that the showing on which the work was done did not give indications of enough to warrant further exploration.

Assay Office

The Territorial Government Assay Office at Keno was maintained as usual during the year. There were 1098 rocks submitted for analysis. Gold and silver assays or quantitative analyses were done on all the samples. Lead analyses were done on 649 samples. Copper analyses were done on four samples and tungsten on one. Numerous qualitative determinations and chemical tests were also done.

WHITEHORSE DISTRICT

Only the usual assessment work was performed on quartz properties in the Wheaton, Watson and Carcross areas. Assessment reports covering 27 claims were submitted. Active interest was shown by a group of Juneau men in antimony claims in the Wheaton district, owned by W. McAlister. Development work there was planned for early in 1942.

Two new claims were recorded during the year.

PLACER MINING

The amount of placer gold mined in the Territory during 1941 on which royalty export tax was paid was 87,442.60 ounces, produced as follows: Dawson District 83,959.48 ounces; Mayo District 2,550.75 ounces; and Whitehorse District 932.37 ounces. The gold production was 10,696.01 ounces less than for the previous year. The total number of placer claims in good standing for the whole Territory was two thousand six hundred and sixteen.

DAWSON DISTRICT

In the Dawson District, 52 new placer claims, 46 restaked claims, and 2,332 renewal grants were issued, representing 2,430 claims in good standing. Three dredging leases covering twenty-three miles were renewed. Fees for the renewal of four hydraulic leases were paid.

Snowfall during the winter of 1940-41 was without doubt the lowest ever known in this district and it was estimated that the amount of snow on the ground just before breakup was only about one-third of the least heretofore recorded. There was no high water during breakup or in June when melting snow in the mountains usually resulted in high water in rivers. Precipitation during the entire summer was below normal, and drought conditions prevailed. A short spell of cold weather occurred in the latter part of September and there were colder spells in the middle and latter part of October. Three weeks of very cold weather occurred in the latter part of November but the last half of December was quite mild. Snowfall during the fall and winter was about normal. Dry summers are usually marked by periods of hot weather but temperatures during the summer of 1941 were a little below average. Extreme low water conditions occurred in all streams during the latter part of the season, including the Yukon River.

The Yukon Consolidated Gold Corporation, Limited

Property

The company maintained in good standing all property previously controlled, including dredging leases, hydraulic leases, and placer mining claims.

Power Generation and Transmission

The company's hydro-electric power plant on the North Fork of the Klondike River operated continuously during the year. It generated 32,989,200 kilowatt-hours of electricity, of which 88% was used by the company in connection with its mining operations. The balance was sold to the Dawson City Utility Companies. The power output was somewhat below that of 1939 and 1940, due to decreased demand caused by the forced curtailment of stripping operations during periods of water shortage.

The power ditches, 22 miles in length, were maintained in first class condition. The lower ditch bank was surfaced with gravel and built up at a number of points. Four dump trucks with a shovel for loading were operated for almost nine weeks on this work. A large electric dragline was operated for eight and one-half weeks on the lower end of the South Fork Ditch to clean out and regrade the ditch and restore its original section. At the end of 1941 the Company was maintaining 106.7 miles of 33,000 volt primary transmission line, 36.35 miles of 2300 volt secondary line of which 8.0 miles were carried on the same poles as a 33,000 volt circuit, 85.4 miles of high tension telephone line and 68.5 miles of telephone lines connected to the Dawson town switch-board. Three circuits were added to the city telephone line between the Dawson switchboard and Bear Creek camp, a distance of about 7.5 miles.

Hydraulic Stripping

Hydraulic muck stripping operations were continued during the summer season at eight large plants previously operated. Hydraulic gravel levelling on Lower Bonanza Creek was also continued. All plants were more or less seriously affected by water shortages during the summer, as all were dependent on the supply in local streams. Some of them, especially No. 5 plant, were shut down for extended periods. The total yardage stripped during the season was therefore considerably below that of the immediately preceding years but the water duty was higher as the plants could not take maximum advantage of the seasonal thaw. All of the plants were shut down much earlier than usual on account of early cold weather in the latter part of September. Water delivery from ditch systems used principally for supplying stripping plants is summarized below.

Total Water Delivery - M.I.D's.

	1940	1941
Sulphur-Australia Ditch	170,040	89,264
Quartz Ditch	31,679	22,396
Burnham-Jensen Ditch	Nil	5,677
Total	201,719	117,337

A total of $197,830.00 was expended on stripping operations for an average of 7.35¢ per cubic yard stripped. The results of stripping operations are tabulated below. The stripping on Lower Bonanza was levelling of gravel hydraulic tailings to decrease dredging depth.

Area No.	Location	Operating Dates Started	Ended	Water Season Days	Water Used M.I.D's	Cu. Yds. Removed
5	Granville	May 4	Sept. 20	87	22,129	355,253
6	Lower Sulphur	2	21	107	25,241	526,233
7	Quartz Creek	1	22	114	22,699	362,883
8	Middle Sulphur	4	20	136	27,186	474,052
9	Upper Sulphur	5	21	130	17,374	370,101
10	Middle Dominion	1	22	137	29,715	239,270
11	Middle Hunker	1	20	134	24,080	266,068
	Lower Dominion	1	21	136	14,783	98,359
	Total				158,489	2,594,431
4	Lower Bonanza	5	22	132	24,718	97,788
	Total				183,207	2,692,219

Average Water Duty - muck only - 16.37 Cu. Yds. per M.I.D.
" " " - Gravel (#4) 3.96 " " "
" " " - Total - 14.69 " " "

Cold Water Thawing

Cold water thawing operations were continued at seven plants. Two new plants located on the lower Klondike and lower Bonanza Creek were also operated. The large plant on the Lower Klondike thawed ground for Dredge No. 3 in a large island of virgin ground surrounded by dredge tailings. The pumping plant was located on a slough of the Klondike River. Point holes in this area were drilled, as points could not be driven by hand in the heavy gravel. Three gasoline powered prospect drills were operated on a 3-shift basis from January 1 to April 14, except for short shutdowns due to cold weather. At least two water seasons were required on the average for thawing in the area. The Lower Bonanza plant, which was being operated for the benefit of Dredge No. 4, was in Yukon Gold Company dredge tailings which had frozen since being dredged. The frozen areas were very irregular in extent and depth and extensive probing was necessary to locate their outlines. The water required for various thawing operations was taken from local streams, except for a small amount of water furnished to the Granville area from the Sulphur-Australia Ditch. The thawing plants were not affected by the water shortage during the summer of 1941. The average water temperature was normal at 47.1°F.

A total of $311,740.00 was expended on thawing operations during the year, for an average of 4.38¢ per cubic yard. In addition, $25,620.00 was spent on thaw-drilling at the No. 3 plant. The total yardage thawed during the season was higher than any preceding year. Data on thawing operations is tabulated below. Natural thawing made 614,100 yards of gravel available for mining.

Area No.	Location	Operating Dates Started	Operating Dates Ended	Thawing Season Days	Water Used M.I.D.'s	Cu. Yds. Thawed
3	Lower Klondike	May 15	Sept. 22	131	56,047	670,863
4	Lower Bonanza	May 9	Sept. 20	135	90,097	492,548
5	Granville	May 5	Sept. 16	135	116,766	1,046,648
6	Lower Sulphur	May 4	Sept. 20	140	167,697	1,226,676
7	Quartz Creek	May 4	Sept. 20	140	56,982	671,211
8	Middle Sulphur	May 4	Sept. 16	136	129,000	851,786
9	Upper Sulphur	May 5	Sept. 16	135	102,186	525,317
10	Middle Dominion	May 5	Sept. 17	136	120,187	842,642
11	Middle Hunker	May 6	Sept. 18	136	116,020	780,634
	Total or average			136	954,982	7,108,325

Dredging

Nine dredges were operated for the entire season and a tenth dredge, No. 4, was started on September 18th after its reconstruction was completed. This 16 cubic foot dredge was dismantled in the Arlington area in 1940, the machinery reconditioned, and the dredge rebuilt on Bonanza Creek. It was scheduled to redig an area previously dredged by Yukon Gold Company. The old dredge tailings were covered with hydraulic tailings from high level benches over at least two-thirds of the area which this dredge was expected to mine. The hydraulic tailings were very deep in some places and had to be levelled off by hydraulic stripping or other means to a depth which the dredge could handle.

The average starting date of dredges in the spring was a little earlier than normal as a result of an early breakup and resulting increase in power supply. The dredging season was somewhat shorter than the previous few years on account of early cold weather in the fall and consequent reduction of power supply. As a result of light snowfall during the winter of 1940-41, there was unusually deep seasonal frost in the ground which hampered the dredges in the spring. Dredge No. 3 was in the Klondike River a short distance above Ogilvie Bridge during most of the season, where the ground was shallow and the bedrock very hard. Dredge No. 2 continued operations in naturally thawed areas in and near the Klondike River just below Bear Creek. Data on dredging operations is tabulated below.

Area No.	Location	Size Bucket Cu. Ft.	Operating Dates Started	Operating Dates Ended	No. Days	Cu. Yds. Dredged
2	Klondike River	16	May 6	Nov. 27	205	1,732,210
3	Lower Klondike	16	May 2	Nov. 29	211	1,502,015
4	Lower Bonanza	16	Sept. 18	Nov. 2	45	276,778
5	Granville	7	Apr. 22	Nov. 24	216	877,723
6	Lower Sulphur	7 1/2	Apr. 22	Nov. 2	194	797,189
7	Quartz Creek	5	Apr. 27	Nov. 3	190	349,262
8	Middle Sulphur	7	Apr. 24	Nov. 3	194	704,312
9	Upper Sulphur	5 3/4	Apr. 25	Oct. 11	169	403,831
10	Middle Dominion	7	Apr. 22	Nov. 4	196	780,023
11	Middle Hunker	7 1/2	Apr. 25	Nov. 2	191	781,927
						8,205,270

Of the 8,205,270 cubic yards dug during 1941, 4,971,045 cubic yards, yielding $1,985,000, were dug from ground included in the Company's proved gravel reserves. The remaining 3,234,225 cubic yards, yielding $340,000 were dug by Dredges Nos. 2 and 3 from ground in the Klondike Valley which was not included in proven reserves. The cost of dredging was 14.17 cents per cubic yard.

Production

Total gold production for the year from dredges was 60,526.83 ounces of fine gold and 4,623.77 fine ounces of silver worth $2,333,681.00. This represents an average of 28.43 cents per cubic yard dredged at $38.50 Cdn per ounce for gold, or approximately .01 ounces of crude gold per cubic yard dredged.

Construction and Capital Expenditure

A 3500-foot channel with dams, and a flood control structure with gates at the discharge end was completed for diverting Wounded Moose Creek into Australia Creek. At the control dam in Australia Creek a pump station was built and pipe line installed for furnishing additional water to the Australia ditch during low water periods. A short power line was also built, substation installed and an operator's cabin constructed.

Work was started on construction of an extension to the Sulphur-Australia Ditch system to provide additional water for No. 9 stripping operations on Upper Sulphur.

A 2.1 mile extension to the Sulphur ditch was excavated on the right limit of Sulphur Creek, the upper end being on Claim 41 Below Discovery. The former Quartz-Indian River pump station was to be moved to this point and a pipe line laid to convey the water to the upstream extension of the ditch on the left limit of Sulphur Creek. Excavation of 0.7 miles of ditch was completed between the discharge end of the pump station line and the left limit of Brimstone Creek where a 2160-foot syphon with 200-foot head was to be constructed to cross this valley. Excavation was completed for 2.6 miles above Brimstone Creek and all structures built. The discharge pipe line from the Quartz-Indian River pump station was dismantled and moved to Sulphur Creek for reassembly.

A new camp for accomodation of 30 men was built near the government road at the mouth of Jensen Creek. It consisted of a mess house, two bunkhouses, cooks' and waiters' bunkhouses, a tractor garage and a bathhouse.

Miscellaneous buildings were constructed at various camps including a chief operator's cottage at the North Fork Power Plant, cooks' and waiters' bunkhouses at No. 4 and No. 6 Camps, a tractor barn at No. 7 Camp and a stable at No. 4 Camp. Two bunkhouses at No. 11 Camp were improved. A covered platform for storing gasoline in drums was built at Bear Creek.

During the winter of 1940-41 a 2-story building which had formerly been used as a combined mess and bunkhouse was moved from Arlington to the main camp at Bear Creek. The building was set on a concrete foundation, completely remodeled and finished for use as a general office building. An air-conditioned heating system was installed, with electricity for heating and an auxiliary steam heating unit in case of power failure. Quarters previously occupied by the engineering department were remodeled for use as a staff dormitory.

Reconstruction of Dredge No. 4 on Bonanza Creek was completed and operations commenced on September 18th. The rebuilt dredge had 16 cubic foot buckets and could dig 52 feet below water level with a 20-foot bank. The hull and trusses were of timber construction except for structural steel supports under the major machinery units. Machinery and some structural steel work from the old dredge was completely overhauled, the stacker rebuilt and lengthened and the digging ladder lengthened. Otherwise all new material was used. Many changes and improvements in design were incorporated in the rebuilt dredge, the engineering work being done by company engineers. The dredge was warmly housed, and equipped with a modern heating system and other features required for satisfactory cold weather operation.

Capital expenditures amounted to $288,000.00 for dredge No. 4, $118,000.00 for ditches, camps and miscellaneous, and $55,000.00 for new stripping and thawing equipment.

Shops and Transportation

The machine shop, electric repair shop and repai garage at Bear Creek were operated continuously durin the year. The machine shop handled all machinery overhauling for Dredge No. 4 and constructed a large part of the structural steel work, truss fittings, large piping, machinery guards and miscellaneous items required for the dredge. An all welded steel distributor with structural supports was built and the old gold tables were rebuilt for the dredge. In addition, the shop handled the usual amount of dredge repair work and miscellaneous jobs. The electric repair shop handled routine maintenance work, all wiring on construction jobs, installation of electrical equipment on Dredge No. 4, and construction and upkeep of power and telephone lines. About five miles of power line was rebuilt on the South Fork Ditch. The repair garage maintained all automotive equipment, diesel tractors, gasoline engines for drills and other gas engine equipment. All truck freighting and some tractor freighting was handled by contract.

Prospect Drilling

Immediately after completion of thaw drilling in April, two drills were moved to Dago Hill, a high level White Channel bench deposit on the left limit of Hunker Creek just above its mouth. Thirty-six holes were drilled with an average depth of 95 feet and a maximum depth of 147 feet. As a result of this investigation gravel reserves for hydraulic mining were substantially increased. Four deep holes were also drilled on top of Australia Hill, in high level White Channel and other bench gravels lying on the right limit of Hunker Creek between its mouth and the Klondike River Valley. No workable values were found.

Soon after the opening of navigation the three drills were moved to Henderson Creek, a right limit tributary of the Yukon River about 68 miles upstream from Dawson. There were 417 holes drilled on this creek, resulting in an addition of approximately 10 miles of creek ground to dredging reserves.

Just before the close of navigation the drills were brought back to Dawson and further drilling was done on upper Gold Run Creek, a right limit tributary of Dominion Creek about three miles upstream from Granville. As a result of this investigation, a possible addition was made to dredging reserves.

A total of $49,000.00 was spent on prospect drilling during the year.

Employment

The average number of men employed during the year was as follows.

January 1 to March 29	129
March 30 to October 11	586
October 12 to December 31	200
Average for the year	390
Peak during the year	702
Total man shifts worked	141,441

A total of $1,163,000.00 was expended for salaries, wages and board.

Miscellaneous Expenditures

Expenditures for equipment and supplies not purchased locally amounted to $507,000.00 on which freight charges of $118,000.00 were paid. Local purchases, consisting principally of groceries, gasoline and horse feed amounted to $245,000.00. Local wood purchases and brush contracts totalled $35,000.00, and local freight charges amounted to $28,000.00.

The company expended $4,966.00 on main road work, principally on improvements to the Bonanza road, Bear Creek road, and the North Fork road between Rock Creek and the ferry crossing at the Power Plant. In addition, a number of secondary roads were constructed to serve company operations. Some snowploughing was done.

General

Transportation conditions were very good during the year, as could be expected during a dry season. Practically all roads in the district were open for automotive traffic during the entire winter of 1940-41, which was unusual, and until late in the fall of 1941. Stripping and dredging operations and some thawing operations were shut down for ten days commencing in the latter part of July, due to a general stoppage of work. As a result, stripping yardage and dredge production were directly and noticeably affected.

Holbrook Dredging Company

The Holbrook Dredging Company, in Receivership, operated a dredge on the upper Sixtymile River, between April 30th and November 4th, 1941. It produced 3,021.86 crude ounces of gold which had a value of $88,839.00. The dredge operated on 32 claims leased from H.A.R. Stewart. The dredge was operated by two 205 H.P. caterpillar diesel engines, and by a small boiler of approximately 25 H.P. Fuel consumed by the dredge and the camp totalled 21,375 Imperial gallons of diesel oil, 2,136 Imperial gallons of gasoline and kerosene, and 200 cords of wood. Approximately 290,000 cubic yards of stream gravel were dredged. An average of sixteen men was employed. The total wages amounted to $26,463.50, and the cost of board was $6,163.50.

The dredge was in very bad shape even though it was improved considerably in 1941. It was estimated that the dredge was not capable of digging any more than 50% of its capacity.

It was reported that the creditors were negotiating with Mr. Frank Friedle as Trustee for the Sunshine Mining Company to take over the dredge and relieve the receiver of his duties.

Clear Creek Placers, Limited

Clear Creek Placers, Limited, formerly known as Canadian Placers, Limited, continued their operations using three T.D.-18 International Tractors with bulldozers, one 37-13 Bucyrus Erie drag-line, and one 10-B Bucyrus Erie drag-shovel. Four miles of ditch on the right fork and main Clear Creek were surveyed and one mile was constructed. The ditch was to be completed early in 1942, and water from it was to aid in mining the Gergich and Spritzer ground on the main creek. On the Left Fork actual sluicing started on May 12th and continued until October 4th, 1941. During that period, 119,600 cubic yards of gravel was sluiced and $77,470.60 of gold was produced. Stripping of 118,923 cubic yards of muck from gravels to be mined in 1942 was completed. An average of twenty-six men was employed from May 1st to October 12th, inclusive. This company planned to install a 3-cubic foot pontoon type steel constructed dredge on the Left Fork of Clear Creek in 1942, and to move the drag-line equipment to the Right Fork and main creek.

Canadian Tungsten Limited

Canadian Tungsten Limited, acquired nine placer mining claims and two prospecting leases of three miles on Canadian Creek and its tributaries. A small drag-line and other equipment was put on the ground, and testing by panning for gold and tungsten began June 5th. The drag-line, and International TD-14 Caterpillar with hydraulic blade began work in mid-August. A test was made with a ½-cubic yard Sauerman Scraper. Gravel was elevated with the scraper along an incline to a dump box where large rocks were removed by hand. A 24-inch wide metal sluice equipped with pole riffles and undercurrent tables was the sole method of recovery. From August 10th to September 15th a total of 2,800 cubic yards of gravel were treated, resulting in recovery in gold of an average of $1.56 per yard in addition to the ferberite (wolframite) recovery.

Other Placer Operations

Messrs. Stewart and Campbell on Miller Creek in the Sixtymile area confined their operations to hydraulic work and drilling on bench ground on Hydraulic lease No. 46 during the early spring. In August, they could secure barely enough water for their mess house.

Another mining operation was started in the Sixtymile district during 1941. The Idaho Canadian Company (United States capital) acquired ground on Glacier Creek, Big Gold Creek and Sixtymile Creek from W.A. Williams. A second-hand pontoon dredge from the United States was shipped to Whitehorse late in 1941. A part of the shipment reached Dawson, and some of the equipment was freighted to Big Gold Creek, where a camp was started. Owing to the fact that the Idaho Canadian Company could not obtain a diesel engine to operate the dredge, the construction of the dredge was postponed.

Yukon Alluvial Golds, Limited, an associate company to Clear Creek Placers, Limited, acquired options on prospecting leases on Thistle, Britannia and Selwyn Creeks, and carried out a drilling program during the summer. Drilling was completed on Britannia Creek and Selwyn Creek. Results of this prospecting were not announced.

Placer ground on Ballarat Creek and Kirkman Creek was optioned to a Mr. F.P. Crawford of California. Some prospecting was done by sinking shafts, and prospecting was to be continued in 1942.

On Last Chance Creek Messrs. Bremner and Franich installed a diesel operated pump and used the water from the creek to hydraulic the hill gravels. This was the first plant of the kind in the territory to be operated by individual miners. It promised to be a success.

MAYO DISTRICT

During 1941, 2550.75 ounces of gold were exported from this district. There were 137 placer claims in good standing in the district, of which 31 were new claims, 96 were previously existing claims, and 10 were previously existing claims which were restaked.

During 1941, there was considerable concern about the availability of heavy machinery, and restrictions on the supplies of parts due to war-time. Letters from the Mining Recorder and mining companies working in the Mayo area made much of these problems, and stressed the possibility of recovering scheelite, a strategic mineral in great demand, if arrangements to overcome the equipment problems could be made.

Haggart Mining Company

As in former years, the principal placer operation of the district was that on Haggart Creek which operated under the name Haggart Mining Company, and was managed by Mr. Edward H. Barker. During 1941, this company worked out approximately two creek claims lengths. They moved 70,000 cubic yards of bench and stream gravel and recovered 1968.7 crude ounces of gold. The crude gold was .855 fine gold, and .084 silver. Ten men were employed on this operation from May 8th to Oct. 15th. The mode of operation was the same as in 1940.

Plans for 1942 were to move up Haggart Creek to the mouth of Dublin Gulch and operate at the mouth and up Dublin Gulch the 1000 ft. which the claims on Haggart Creek allowed. By so doing, a considerable amount of placer scheelite which had concentrated at the mouth of this creek from the placer workings of many years on Dublin Gulch could be recovered. The problem of insufficient spare parts due to the war for the machinery used could prevent the company from working the full season.

The twelve miles on Haggart Creek held below the Haggart Mining Company ground was prospected to a very limited extent with a Keystone drill by Robert S. Potter. Mr. Potter also put some holes down on Duncan Creek both on ground held by himself and that of Mr. C.E. Fisher. It appears that indications on Duncan Creek were not very favourable and the idea of drilling further on Duncan Creek was abandoned. The drill was moved up to upper Haggart Creek with the intention of using it in blocking out ground for future operations of the Haggart Mining Co. Open cut prospecting was done in the fall on Haggart Creek with a bulldozer on claims 12 to 22.

Fred Taylor

Mr. Fred Taylor operated on Dublin Gulch for 5 months in 1941 with himself and three men, and an extra 2 men for 1 month, and recovered approximately 200 ounces of gold. He was not able to put all his ground through the boxes due to his failure to get the services of the large bulldozer working on the Haggart Mining Company ground. A considerable amount of scheelite was also recovered and 1764 pounds of this was shipped. It was not all mined during 1941, as a great deal of it was a collection made over a period of the previous five years.

Vilhelm Lunde

Vilhelm Lunde worked on ground on Dublin Gulch below Mr. Taylor. The ground was worked in previous years for the gold. During the winter of 1941, preparations were made to recover scheelite during the 1942 season. In previous years, the scheelite was considered a nuisance as it tended to plug the riffles in the sluice boxes. It was therefore urged through the boxes and allowed to concentrate below.

Other Placer Operations

On Highet Creek, Mr. Middlecoff carried on his usual operation with four men employed. There were no plans to enlarge operations in 1942.

On Duncan Creek at the bridge, Mr. C.E. Fisher prospected with his bulldozer on one mile of ground. A large open cut about 1000 feet long and from 1 to 15 feet deep was dug. Gold was found all through this gravel, but in such quantity that a very large operation would be required to wash enough gravel to be a paying proposition.

Mr. Fisher also had a lay agreement on one mile of ground held by Harvey J. Ray at the head of Highet Creek. A large open cut was put in on this ground late in the summer but bedrock was not uncovered. Mr. Fisher planned to return there in 1942 to perform further prospect work.

Other mining operations were conducted on Lightning Creek, and on creeks flowing into Mayo Lake.

WHITEHORSE DISTRICT

In the Whitehorse District fifteen new placer claims were staked, one claim was restaked, and thirty-three renewal grants were issued, making forty-nine claims in good standing. There were 932.37 ounces of gold recovered. No new mining operations were started.

Mining activity in the Kluane area was negligible in 1941. Three prospectors operated on Bullion and Burwash Creeks with little success due to lack of water, it being a dry summer. One prospecting lease was issued for five miles of placer ground on Burwash Creek. There was no word of any successful results having been obtained by early 1942.

In the Dezedeash Lake Area, Messrs. Vass and McAuley staked their lease on Shorty Creek into ten claims. Mining operations were planned for 1942. B. Beloud mined on Iron Creek. The Pioneer Gold Mines Company was interested in his property.

Mining activity in the Livingstone Creek area was beset by problems in 1941. Mr. T.H. Kerruish had a poor year and very little development work was performed due to lack of water, his property being solely a hydraulic one. Messrs. Emminger and Engle suffered the loss of part of their placer workings through a heavy slide. Only one claim was being worked at the end of the season.

No mining activity of any nature was reported from the Teslin area.

CHAPTER 3.

MINERAL INDUSTRY OF YUKON, 1942

INTRODUCTION

Information on the mining industry in Yukon in 1942 was compiled from reports by J.J. McCarthey, Mayo District Mining Recorder, and G.A. Jeckell, Comptroller. Additional information was from correspondence of Treadwell Yukon Corporation, Haggart Mining Company, and W.H.S. McFarland, general manager of Yukon Consolidated Gold Corporation.

LODE MINING

There was little prospecting activity done during 1942. The most active region was the Mayo Mining District, where two promising scheelite occurrences were discovered. Necessary representation work only was done on claims in good standing. No mine development work was done. No mining operations were carried out at the properties of Treadwell Yukon Corporation, Limited during 1942, but ore mined by several lay operators, and some ore and concentrate produced by the company in 1941 were shipped. Shipments totalled more than 1,150 tons, and contained 489,275.96 ounces of silver, 52.74 ounces of gold, and 1,391,647 pounds of lead.

DAWSON DISTRICT

In the Dawson District eleven claims were staked and one hundred and nine claims were renewed. No work other than the necessary representation work was done.

MAYO DISTRICT

In the Mayo District, 338 claims were kept in good standing, and 132 claims were held under twenty-one year leases. The quartz mining operations in the district in 1942 were very small when compared to former years, due to the 1941 closing of the Treadwell Yukon Corporation's operations on Galena Hill.

Treadwell Yukon Corporation, Limited

The Treadwell Yukon Corporation, Limited carried on no mining operations during 1942. Shipments of concentrates and ore during the year came from company operations after the close of navigation in 1941, and from individual workings mined during 1942. The Treadwell Yukon Corporation, Limited shipped 681.75 tons of concentrate, and 144.81 tons of ore. Individuals who shipped ore were Bacon and Beck, 77.73 tons; Bacon and Brefalt, 29.65 tons; Ellef Bjonnes, 118.91 tons; John Bacon, 46.52 tons; and Clem Sinyard, 51.28 tons. All shipments totalled 1,150.65 tons worth $303,689.00, containing 52.74 ounces of gold, 489,276 ounces of silver, and 1,391,647 pounds of lead. As Treadwell Yukon Corporation Limited had decided to cease operations, all of the smaller mine machinery such as hoists, drills, drill steel, pumps and wire ropes were shipped to contracting companies engaged in building sections of the Alcan Highway out of Whitehorse. Three diesel engines were also shipped to the Whitehorse District, including the engine which was used to supply the Town of Mayo with electric power. The balance of the machinery not taken by the contractors in the Whitehorse District was shipped to Vancouver to be offered for sale.

Many of the building at the "Elsa" camp were dismantled for the sheets of corrugated iron which they contained. A crew of about 25 men was engaged in dismantling, crating and boxing the equipment and supplies for removal elsewhere.

The aerial tramway which was used to convey ore from the "Calumet" claim to the flotation mill three miles away was left intact as was the mill. All mineral claims, plus three diesel engines capable of generating sufficient power for renewal of operations, were left as a nucleus for future use, should capital be found to take over holdings.

Other Lode Operations

A promising scheelite discovery was made by Mr. Harvey J. Ray on Lynx Fork Creek, a tributary of Haggart Creek, during the fall of 1942. Only a limited amount of work had been done on the discovery when it was viewed by Mr. D.W. Cameron, field engineer of Ventures Limited. According to Mr. Cameron, Mr. Ray had found a very large body of scheelite bearing rock, but samples taken by him ran very low in WO_3. However, later in the season Mr. Ray took samples in another place, and got assays as high as 11% WO_3. Heavy snow forced the postponement of further work to 1943.

On the divide between Cement and Scheelite Creeks in the Johnson Creek area, another scheelite discovery was made. Although it did not appear to be so large as the Lynx Fork strike, it seemed to contain richer rock. As this strike was also made late in the fall, there was no prospecting work done. A group of claims was staked, and it was planned to prospect the property in 1943.

WHITEHORSE DISTRICT

In the Whitehorse District there was little mining or prospecting activity during the year. The Alaska Highway and associated projects were apparently more attractive. Matthew Watson of Carcross renewed his claims in the Carcross area. Walter McAlister continued to work on his antimony properties in the Wheaton River area. No new developments occurred.

PLACER MINING

There were 2,716 placer claims in good standing in the Territory during 1942. Eighteen new placer leases totalling 42 miles, and 42 renewals of placer leases totalling 66 miles were granted during the year, representing a total of 108 miles of leased ground. An exemption from representation work was granted through Order-in-Council P.C. 7750 of September 2, 1942, but only 42 miles of leases were renewed without work being done.

The amount of placer gold mined during the year on which royalty export tax was paid was 105,430.89 ounces, produced as follows: Dawson District 102,570.61 ounces, Mayo District 2,218.00 ounces, and Whitehorse District 642.28 ounces. The gold production was 17,988.09 ounces greater than for 1941.

DAWSON DISTRICT

In the Dawson district, 114 new placer claims, 28 restaked claims and 2,416 renewals were issued, representing 2,558 claims in good standing. Three dredging leases covering 23 miles, and four hydraulic leases were renewed.

The winter of 1941-42 was unusually mild. A cold spell of about ten days' duration occurred in early December, when the temperature fell to -55 degrees Fahrenheit, after which the weather was comparatively moderate until mid-March, when again temperatures of below -40 degrees Fahrenheit were reported. First indications pointed to an early spring, but April and May were backward months. The snowfall during the winter was slightly below normal but the summer rainfall was about average. The first half of the summer season was unusually dry, but beginning about July 15th, heavy intermittent rains occurred and kept the streams at high stages throughout the remainder of the season. The ice in the Yukon River moved out on May 6th at 10:30 a.m. with only a slight rise of water. That in the Klondike River practically melted out. During the dry period, especially in the latter part of May and in June, many forest fires occurred and for a period of almost three weeks the creek valleys were filled with a blanket of smoke. The fall was mild and excellent dredging conditions prevailed until the first of December.

The Yukon Consolidated Gold Corporation, Limited

Property

The Company maintained in good standing all property previously owned or controlled, including dredging leases, hydraulic leases, placer mining claims, timber berths, water rights, etc.

Power Generation and Transmission

The company's hydro-electric power plant, which was located on the North Fork of the Klondike River, operated continuously during the year and generated a total of 33,867,400 kilowatt-hours. Of this amount 73% or 24,623,400 kilowatt-hours were used by the company in its mining operations. The Dawson Electric Light and Power Company, Limited purchased 4,169,616 kilowatt-hours for power and light in the city of Dawson. The power plant services required 1,368,900 kilowatt-hours and the line loss amounted to 3,704,484 kilowatt-hours. The power output was considerably below the capacity of the plant, due to the decreased demand caused by a reduction in stripping and thawing operations. Owing to the backward spring and low spring water levels in the North Fork and South Fork Rivers, it was necessary to delay the start of some operations.

The power ditches, totalling 22 miles in length, were maintained in good condition and were improved by widening and regrading the water channel and reinforcing the lower ditch bank. An electric powered dragline, equipped with a 1-1/2 cubic yard bucket was used on this work for the greater part of the summer. The company's power distribution system, comprising 106.7 miles of 33,000 volt primary transmission line and 36.35 miles of 2,300 volt secondary line, was maintained by a crew of seven men which, under normal conditions, would have numbered twelve. Excellent service was maintained over 85.4 miles of high tension telephone line centralized at the North Fork Power Plant, and 68.5 miles of ordinary telephone line operated through the Yukon Telephone Syndicate, Limited, switchboard in Dawson.

Hydraulic Stripping

Stripping of muck overburden was carried on at seven places during the summer. It was necessary to operate with minimum crews and the work at all plants was seriously affected thereby. Three plants, Granville, Upper Sulphur and Middle Dominion, were closed down at an early date and the men used to build up crews at other places. At Quartz Creek the start of the stripping operation was delayed until late in June, when the thawing crew was available for this work after having completed the driving of points. The water delivered from the Sulphur-Australia Ditch, the only ditch supplying water to stripping operations during the year, amounted to 135,922 M.I.D. Approximately 20 water days were lost from two large breaks which occurred on the Sulphur Creek section. The total amount of muck removed was 2,501,681 cubic yards at a cost of $174,285.00, or 6.97¢ per cubic yard. The water used amounted to 210,078 M.I.D., giving a duty of 11.92 cubic yards of muck per M.I.D. The yardage removed and the water duty would have been much greater had it been possible to take full advantage of the fall water supply and the surface thaw at the plants which were prematurely closed down. The results of stripping operations at the various plants during the 1942 season are as follows.

Area No.	location	Operating Dates		Water Season Days	Water Used M.I.D.	Cu. Yds. Removed	Cu. Yds. Removed Per M.I.D.
		Started	Ended				
5	Graville	May 5	Aug. 20	106	36,134	294,072	8.14
6	Lower Sulphur	May 5	Oct. 2	109	28,378	374,987	13.21
7	Quartz Creek	Jun 23	Oct. 3	101	19,684	231,990	11.80
8	Middle Sulphur	May 17	Oct. 2	115	52,442	669,058	12.76
9	Upper Sulphur	May 12	Sep. 16	127	20,085	453,208	22.56
10	Middle Dominion	May 10	Sep. 14	127	27,201	247,295	9.16
11	Middle Hunker	May 8	Sep. 30	135	26,254	231,071	8.80
	Total or Average			117	210,078	2,501,681	11.92

Thawing

Cold water thawing operations were carried on at seven localities during the 1942 season. Although the thawing programs were much smaller than in former years, it was possible to complete that of only one plant, Quartz Creek. At all other plants the yardage thawed represented from 50 to 75 percent of the normal amount required. Weather conditions were unusually favorable for thawing during the entire season. The hot, dry weather in June brought water temperatures far above normal, the average being approximately two degrees higher than in any of the previous seven years. Although conditions continued favorable until past the end of September, several plants were closed down at an earlier date owing to the lack of men to operate them. A total of 4,529,117 cubic yards was thawed at an expenditure of $202,648 or a cost of 4.474¢ per cubic yard. The average water temperature was 49.7 degrees Fahrenheit and the thawing duty 7.25 cubic yards per M.I.D. of water. Following is a tabulation of the thawing operations as carried on at the different plants during the 1942 season.

Area No.	Location	Operating Dates		Water Season Days	Water Used M.I.D.	Cu. Yds. Thawed	Cu. Yds. Thawed Per M.I.D.
		Started	Ended				
3	Lower Klondike	May 16	Sep. 29	137	66,002	1,176,274	17.72
4	Lower Bonanza	11	29	142	103,009	446,199	4.33
5	Granville	11	16	129	88,154	674,608	7.64
7	Quartz Creek	16	July 17	63	16,324	123,910	7.59
8	Middle Sulphur	15	Sep. 18	127	132,672	802,100	6.04
10	Middle Dominion	15	16	125	109,636	659,088	6.01
11	Middle Hunker	14	18	128	109,083	646,938	5.93
	Total or Average			122	624,880	4,529,117	7.25

The net result of the 1942 dredging, and restricted thawing operations was to reduce the thawed proven reserves by 2,112,539 cubic yards. Dredges 6 and 9 were left without thawed reserves, so could not be operated in 1943 even if labour were available. Reserves for all other dredges except 3 and 11 were reduced in varying measure.

Dredges

Ten dredges were operated during the 1942 season. Dredges Nos. 6 and 9 were, however shut down before the end of the normal operating season in order to transfer the men to other dredges where the crews had become too small for proper operation. Spring dredge repairs were started slightly earlier than usual, on March 16th. Dredge No. 5 which was located at Granville, commenced operation on April 8th. However, owing to the backward spring and the lack of sufficient power, the starting dates of the other dredges were drawn out to May 14th, when Dredge No. 3, located on the Lower Klondike, started digging. Operating conditions were very favourable at all dredges throughout the season.

The dredging period extended to December 1st, when the last dredge was shut down. At the conclusion of its operating season, Dredge No. 2 was permanently closed down and partially dismantled. There were no plans concerning the rebuilding of the dredge. A tabulation of data on the 1942 dredging operations follows.

Area No.	Location	Size Bucket Cu. Ft.	Operating Dates		No. Days	Cu. yds Dredged
			Started	Ended		
2	Klondike River	16	Apr. 30	Oct. 24	177	1,723,814
3	Lower Klondike	16	May 14	Dec. 1	201	1,802,544
4	Lower Bonanza	16	May 1	Nov. 28	211	1,855,590
5	Granville	7	Apr. 8	Nov. 3	209	868,783
6	Lower Sulphur	7 1/2	May 1	Nov. 5	188	796,690
7	Quartz Creek	5	Apr. 19	Nov. 16	211	455,809
8	Middle Sulphur	7	Apr. 25	Nov. 6	195	845,884
9	Upper Sulphur	5 3/4	Apr. 26	Oct. 17	174	416,391
10	Middle Dominion	7	Apr. 11	Nov. 18	221	930,773
11	Middle Hunker	7 1/2	Apr. 25	Nov. 11	200	704,843
	Total					10,401,121

Yardage of 5,019,183, or slightly less than 50% of the total dug, came from proven reserves. The remainder, 5,381,948 cubic yards, was dug outside the proven reserves. Yardage dug from the proven reserves (prospected areas) yielded 114.8% of the values shown by drilling. This compared with an average recovery of 100.7% for all dredges operating in proven reserves over the period 1936 to 1942, inclusive. The dredges operated for 1,985 dredging days compared with 1,811 in 1941. The cost of dredging was 14.21 cents per cubic yard.

Production

The total production for the year from dredging operations was 73,530.003 fine ounces of gold valued at $2,830,907.49, with gold at $38.50 per ounce, Canadian, and 15,609.87 fine ounces of silver valued at $6,295.12 from 10,401,131 cubic yards. The combined value was $2,837,202.61, representing an average value of 27.22¢ per cubic yard dredged.

Construction and Capital Expenditure

An extension to the Sulphur-Australia Ditch system to provide additional water for No. 9 Stripping operation at Upper Sulphur, which was started in 1941, was completed during 1942. This ditch delivered approximately 250 M.I. of water, which was sufficient to insure continuous operation and greatly facilitate the stripping at Upper Sulphur. The ditch was placed in operation about the middle of July but was closed down shortly thereafter due to lack of men to operate it. The total amount expended to complete the ditch and place it in operation was $5,302.01. There was no other major construction or rehabilitation work done during the year.

Shops and Transportation

The machine shop, electrical repair shop and automotive repair garage at Bear Creek were operated in the same manner as in previous years. The machine shop repaired, renewed, overhauled and manufactured all machinery and steel work required in the maintenance and operation of dredges, stripping, thawing and power plants. The electrical repair shop handled all routine maintenance and repair work connected with electrical equipment throughout the operation. The repair garage maintained all automotive equipment, diesel tractors and internal combustion engines in first class condition. All truck freighting and much of the tractor freighting was handled under contract by the McCormick Transportation Company.

Prospect Drilling

No prospect drilling was done during the year.

Reserves

At the end of 1942, a complete recalculation of the company's proven gravel reserves including a number of low-grade, but economic, areas notably on Hunker and Dominion Creeks and on the Klondike Valley, was made. It was found necessary to increase the original estimates of the amounts of barren overburden to be dug by the dredges. These changes had the effect of adding considerably to the cubic yardage of the reserves while reducing the corresponding value per cubic yard.

The revised figures show that the company's proven gravel reserves were 116,241,000 cubic yards containing 1,167,394 ounces of gold worth $40,858,800 with gold valued at $35.00 per ounce. The ground being worked by Dredge No. 4 on Bonanza Creek, estimated at 38,857,000 cubic yards, was not included in the above figures.

Employment

Throughout the entire 1942 season the company's operations were seriously affected by an acute labour shortage. At the start it was recognized that this shortage existed and the operations were planned to fit the number of men available. However, as the season progressed, there was a steady flow of men from the district, attracted by higher wages offered elsewhere, and it was found necessary to shut down several operations in order to bring other crews approximately up to requirements.

The average number of men employed by the Company during 1942 was as follows.

January to March, inclusive	91
April to June, inclusive	401
July to September, inclusive	416
October to December, inclusive	220
Peak during the year,	471
Total man shifts worked,	101,092

Salaries, wages and board totalled $975,080.70.

Miscellaneous Expenditures

Expenditures for equipment and supplies not purchased locally amounted to $221,695.00, on which freight charges of $43,255.00 were paid. Local wood purchases and brush contracts totalled $20,222.00, and the local freight charges amounted to $13,354.00.

The Holbrook Dredging Company

The Holbrook Dredging Company, operating under receivership, continued mining on the upper Sixtymile River. Operations commenced March 22nd, and closed down on November 12th. Unfortunately the dredge sank in the early part of the season, and over a month's dredging time was lost in raising and repairing the hull. It is estimated 280,000 cubic yards of stream gravel were handled from which 2,933.66 ounces of gold were recovered. The gross return to the company for sale of this gold was $86,104.39. An average of nineteen men was employed during the season. Wages, room, and board totalled $40,530.29. Plans for the 1943 season were rather indefinite. The management was endeavouring to secure a secondhand bucket line in the Fortymile District of Alaska as the bucket line was in very bad shape, and operations in 1943 were dependent upon the availability of a replacement. The management also planned to make further repairs to the hull of the dredge to allow operations during the 1943 season.

Clear Creek Placers, Limited

Clear Creek Placers, Limited, discontinued their drag line operations on the Left Fork of Clear Creek and built a 3-cubic foot pontoon-type steel-construction dredge. This dredge was completed on September 7th and began mining. Dredging continued for forty-nine days, until October 25th. During the operating period, 949.20 ounces of gold worth $27,861.68 were recovered from 57,400 cubic yards of gravel, for an average of 48.05¢ per cubic yard. Severe forest fires burned in the area during the summer, and destroyed the Barlow Creek Bridge and many culverts on the road from the McQuesten airfield to the company camp. The company spent $6,940.53 on road repairs, and the Territorial Government reimbursed the company to the extent of $2,000.00, or the total of the Council grant for this road for the year. Twenty-eight men were employed during the construction of the dredge, and eighteen were employed while it operated.

Other Placer Operations

There were the usual summer mining operations by individual claim owners on the older placer creeks in the Klondike and Sixtymile Districts, but no new operations were commenced.

MAYO DISTRICT

Royalty was paid on 2,218 ounces of gold at the Mayo Mining Recorder's office during 1942. The gold recovered by Mr. Middlecoff was shipped directly to the Bank at Dawson, so was not included in the above total for the district.

There were 136 placer claims in good standing in the district. Three new claims were staked, 5 claims were restaked, and 128 claims were renewed.

Mayo was a center of efforts to recover scheelite from placer deposits for the war effort during the year. The scheelite concentrate was shipped to the Mines Branch, in Ottawa. A special grant of $20,000. was made for the construction of a bridge over the McQuesten River, and for the construction of a road to Dublin Gulch, where placer scheelite was obtainable. The work was commenced in March, 1942, and the bridge was completed over the McQuesten River before the break-up of ice on the river. Later a road was constructed from McQuesten Bridge to Dublin Gulch. The sum of $18,653.70 was expended, and the amount unexpended, was refunded to the Receiver General of Canada.

Haggart Mining Company

The majority of the placer mining in the Mayo district was centered in the Haggart Creek area. The largest operation carried on in that area was that of the Haggart Mining Company which held claims 1 to 22 inclusive on Haggart Creek. The operation was under the management of Mr. E.H. Barker, one of the partners in the company.

The gold was recovered from an open cut by means of a Caterpillar D-7 diesel tractor bulldozer which pushed the gravel to the boxes, approximately in the centre of the creek bed. The gravel so delivered was then elevated to the boxes by means of a 3/4 yard Trackson Highlift Shovel mounted on an R.D.6 tractor. As the creek bed was very flat, it was necessary to dispose of the tailings after the gravel was washed. For this purpose, a 1½ yard Sauerman Crescent Scraper operated with a diesel stationary engine and a dragline was used to stack the tailings on the benches of the creek.

In their 1942 operations, approximately 82,000 yards of bench and stream gravel were moved. Approximately two thirds of this was pay dirt, from which 1,491.5 crude ounces of gold were recovered.

The company worked 1½ shifts or 15 hours per day May 11th, 1942 to Oct. 29th, 1942. Eight men were employed. It was reported that this company would not be working during the 1943 summer season, as skilled men were needed to operate the machinery used, and all such men had left the district for more remunerative employment in the Whitehorse District.

Fred Taylor

On Dublin Gulch, Mr. Taylor worked ground owned by himself. He did ground sluicing and used a small gasoline powered hoist to remove and pile large rocks. At the end of the season he gave a lay on his ground to Mr. Robert Swanson and left for the outside. It was believed he recovered approximately 400 ounces of gold.

Vilhelm Lunde

Below Mr. Taylor, on ground leased from him, Mr. Vilhelm Lunde and Mr. Robert Swanson worked recovering scheelite from the old sluiceways left by the early Dublin Gulch placer miners. They recovered 5900 lbs of scheelite concentrate which ran approximately 70% WO_3. They also recovered 150 ounces of gold from the gravel which had been worked in former years.

Hugo Seaholm

Above Mr. Taylor on Dublin Gulch, Mr. Hugo Seaholm worked in his spare time from the Haggart Mining operation on a mile of placer ground held by himself. His work was mainly confined to dead work preparatory to opening up a placer scheelite producing operation in the summer of 1943. It was his object to work the ground in the same manner that Mr. Taylor worked his ground below for the previous 6 years, through ground sluicing and the use of a gasoline powered derrick to hoist the large rocks from the cut. The large rocks appeared to be more numerous in Mr. Seaholm's ground, but it was the opinion of Mr. Seaholm that his ground would produce a greater yield of scheelite than the ground below him. During his preliminary prospecting work, he found the grains of this mineral to be larger than that recovered on the lower ground. He intended to employ two men beside himself and his expectations were that the operation would pay for itself after the preliminary outlay for machinery and equipment.

Other Placer Operations

Mr. Middlecoff continued his operations on Highet Creek during 1942.

WHITEHORSE DISTRICT

In the Whitehorse District one claim was restaked, and 21 were renewed. Two prospecting leases were renewed. Royalty was paid on 642.28 ounces of gold.

No mining activity was reported from the Teslin district during 1942. One claim was restaked on Tatamagouche Creek in the Kluane district, but very little prospecting or mining was done in the area.

In the Dezadeash area, Messrs. Vass and McAuley installed a sawmill and mining machinery in their twelve claims on Shorty Creek, but owing to the labour shortage, they did not report a very successful season. Ben Beloud operated on Iron Creek on behalf of Pioneer Gold Mines, Limited, but was restricted from performing much active work, also due to the labour shortage.

Mr. T.H. Kerruish continued operations on his property on Lake Creek in the Livingstone Creek area, but reported a very unsuccessful year.

CHAPTER 4.

MINERAL INDUSTRY OF YUKON, 1943

INTRODUCTION

Reports by G.A. Jeckell, Comptroller, L. Higgins, Whitehorse Mining Recorder, and S.M. Wood, Mayo Mining Recorder, and correspondence of W.H.S. McFarland, general manager of Yukon Consolidated Gold Corporation provided information on the mining industry in Yukon in 1943.

LODE MINING

There was little prospecting activity in the Dawson and Mayo Mining Districts during 1943. In the Whitehorse District, however, work on the Alaska Military Highway was nearing completion and a number of companies made use of the facility to gain access to previously remote areas for prospecting.

Order-in-Council P.C. 7750 continued in effect in 1943. It allowed claim owners to hold their claims without performing assessment work, because war time conditions had made it difficult to acquire equipment, and workers. The exemption from representation work, and the securing of renewal of claims by the payment of a renewal fee only, proved a great encouragement to claims owners to retain possession of their ground until supplies and labour were procurable. The general result was that practically all claims were renewed, and additional ground was staked.

Treadwell Yukon Corporation Limited carried out no work during 1943. Three laymen worked on high grade deposits on Treadwell Yukon property during the year. They shipped less than 200 tons of lead-silver ore.

DAWSON DISTRICT

In the Dawson District 36 new claims were recorded, and 104 claims were renewed. One coal lease was granted. Late in the year, The Yukon Consolidated Gold Corporation, Limited, took an option on the Crown Granted Claims held by the Consolidated Lone Star, Limited on Victoria Gulch, Bonanza Creek, and also acquired nineteen mineral claims in the vicinity by staking. Prospecting on an extensive scale on these properties was planned.

MAYO DISTRICT

In the Mayo District, 274 claims were renewed and 132 were held under 21 year leases. The claims held in the name of the Treadwell Yukon Corporation Limited had not been disposed of. There were three laymen working on claims belonging to the company. W.H. Williamson worked the "Sadie" claim, Charles Brefalt worked the "Elsa" claim, and John Boon worked the "Calumet" claim. Approximately 181 tons of high grade silver-lead ore were shipped.

Assay Office

The Assay Office was maintained by the territorial government at Keno. There were 1,073 rock samples received from all parts of the territory, and 1,675 assays or quantative analyses were made. In addition, qualitative analyses and chemical tests were made in connection with identification and classification of various rocks and minerals. Assays made were gold and silver 1,073, lead 508, tungsten 43, zinc 22, copper 9, iron 5, silica 4, tin 3, antimony 3, lime 2, manganese 1, barium 1, and molybdenum 1.

WHITEHORSE DISTRICT

In the Whitehorse District eleven new claims were recorded, and fifteen claims were renewed, totalling twenty-six mineral claims held in good standing. Two applications for coal mining leases were made, and three such leases were renewed.

With the Alaska Military Highway nearing completion during 1943, southern Yukon was a mecca for Canadian and American mining companies, syndicates and individual prospectors. Whitehorse was used as the base of their operations. Companies who were represented in the field included Consolidated Mining and Smelting Co. Ltd., Hudson Bay Exploration and Development Co. Ltd., Pioneer Gold Lines Limited, Bralorne Mines Limited, Ventures Ltd., Granby Consolidated Mining Co. Ltd., Conwest Exploration Co. Ltd., Frobisher Exploration Co. Ltd., Anaconda Copper Mining Co. Ltd., Watson Lake Mining Syndicate, International Nickel Co. Ltd., American Metal Co. Ltd., and Climax Molybdenum Co. Ltd.

Notwithstanding this formidable array of mining interests, there were few prospectors involved, and only nine claims were recorded by representatives of the above mentioned companies. The claims were located near the 104 mile Post east of Teslin. Twelve claims were staked within the boundaries of the Kluane Park Reserves. The applications to record were being considered but had not been granted by 1944. The stakers were employees of construction companies working on defence projects in the Kluane Park area.

Yukon Consolidated Gold Corporation, Ltd. undertook no prospecting in gold-bearing areas during 1943, but a preliminary examination was made of a group of copper claims situated on Williams and Merritt Creeks, above Carmacks. These claims, which were within a short distance of the Yukon River, were acquired at nominal cost and, although entirely undeveloped, were considered to lie in a somewhat favorable geological zone.

PLACER MINING

The amount of placer gold mined during 1943 in the Territory on which Royalty Export Tax was paid was 52,853.58 ounces, produced as follows: 52,141.22 ounces, Dawson District, 530.50 ounces, Mayo District, and 181.86 ounces, Whitehorse District. The total gold production was 52,577.31 ounces less than for 1942 because half of the gold dredges were closed due to the scarcity of labour. There were 29 new leases to prospect covering 73 miles granted during the year, and 28 leases covering 75 miles were renewed.

The exemption from representation work, and the securing of renewal of claims by the payment of a renewal fee only, proved a great encouragement to claim owners to retain possession of their ground until supplies and labour were procurable. The general result was that practically all claims were renewed, and additional ground was staked.

DAWSON DISTRICT

In the Dawson District, 65 new placer claims, 24 restaked claims, and 2,409 renewals were issued, representing 2,498 placer claims in good standing. Three dredging leases covering twenty-three miles were renewed. Fees for the renewal of four hydraulic leases were paid. Prospecting leases covering 95 miles of creek were issued in the district 1943.

The winter of 1942-43 was one of the coldest on record. The low temperatures were not extreme but continued for long periods. Following a cold spell in December, when it reached a minimum of -55 degrees Fahrenheit, the new year came in comparatively warm, with temperatures between zero and 8 degrees Fahrenheit above. However, after the first week in January, the weather changed and remained cold, -20 to -55 degrees Fahrenheit until after the middle of February, when there was a two-week period of moderately cold weather from 10 degrees above to 20 degrees Fahrenheit below zero. Thereafter, the weather was very characteristic of the time of the year, with day temperatures of zero to 15 below, and cold nights of more than 40 degrees below, Fahrenheit, gradually moderating into spring. The snowfall was average with the greater amount falling early in the season. In the spring, it disappeared slowly without bringing the streams to high stages. There was little wind other than that which usually occurs during the months of March and April. The official date of the ice break-up in the Yukon River at Dawson was 7:48 p.m. on May 2nd. However, the ice moved only a short distance at this time and did not actually clear out until three days later, on the afternoon of May 5th. The rainfall was greater than normal and was well distributed throughout the summer, making it an ideal season for mining operations. The summer heat, on the other hand, was slightly below normal, due in part to the overcast skies and rainfall. There was a two-week period of unusually warm weather in late June and early July, when many severe electrical and rain storms occurred. The fall was very mild. There were slight frosts on the nights of August 20th and 21st, after which none occurred until September 20th. The first severe frost which affected mining operations happened on October 2nd, when the temperature dropped to 20 degrees Fahrenheit. Ideal dredging conditions existed well into December.

Yukon Consolidated Gold Corporation, Limited

Power Generation and Transmission

The company's hydro-electric power plant, which was located on the North Fork of the Klondike River, operated without interruption during the year. Of the 18,395,400 kilowatt-hours generated, 10,695,900 kilowatt-hours or 58.14% were used by the company in its mining operations, 4,301,788 kilowatt-hours were sold to The Dawson Electric Light and Power Company, Limited for power and light in the city of Dawson, 1,306,900 kilowatt-hours were used in power plant operations, and 2,090,812 kilowatt-hours were consumed in line loss. The power output was far below the capacity of the plant, due to lack of power demand. The water supply in both the North and South Forks of the Klondike River was above normal and equivalent at all times to plant capacity requirement. The power ditches, totalling 22 miles in length, were maintained in good condition. The company's power distribution system was kept in operating order. Good service was maintained over both the power plant high tension and The Yukon Telephone Syndicate, Limited, creek telephone service lines.

Hydraulic Stripping

Stripping of muck overburden was carried on at one place only, Middle Dominion. At first it was planned to operate stripping plants at Quartz Creek and at Middle Sulphur in addition, but it soon became apparent that the scarcity of workmen would prohibit that and those operations were abandoned. Although the Sulphur-Australia and Burnham-Jensen Ditches were not in use during the year, the regular spring preparatory work, such as trenching of glaciers and clearing ice from spillways and intakes, was done in order to protect them from damage during the heavy spring water run-off. Work preparatory to the operating season began at stripping plant No. 10 on Middle Dominion on April 24th and the post operating season work was concluded on October 19th. The results of the stripping operation at Middle Dominion are as follows.

Operating Dates		Water Season Days	Water Used M.I.D.	Cu. Yds. Removed	Cu. Yds. Removed Per M.I.D.
Started	Ended				
May 13	Sept. 27	138	29,860	360,621	12.08

Cold Water Thawing

The only cold water thawing operation carried on during the 1943 season was on the Lower Klondike, in the dredge No. 3 area, where the thawing of ground which had been given water the preceding season was completed. Work there was started late, on May 17th, as there was little preliminary work to be done, and the fall dismantling of equipment was completed on October 16th. The results of this operation are as follows.

Operating Dates Started	 Ended	Water Season Days	Water Used M.I.D.	Cu. Yds. Thawed	Cu. Yds. Thawed Per M.I.D.
May 24	Aug. 17	86	18,830	486,021	25.81

Bonanza Creek Hydraulic Thawing

On Bonanza Creek a hydraulic operation was conducted for the experimental purpose of determining the thawing effect of a fine gravel and silt covering over frozen, coarse dredge tailings. Experience had shown that ground lying under these fine gravels is invariably thawed, although the length of time required for the thawing process to be completed had not been determined. A small crew started work there on April 16th and finished on August 28th. As it was expected that at least two or three years would be required to obtain information as to the thawing effect, no conclusion was formed as to the possibility and practicability of this method. The results of the hydraulicking were as follows.

Operating Dates Started	 Ended	Water Season Days	Water Used M.I.D.	Cu. Yds. Removed	Cu. Yds. Removed Per M.I.D.
May 27	Aug. 20	86	17,740	81,845	4.61

Dredging

Five dredges were operated during 1943. Dredge No. 7, on Quartz Creek, was shut down before the end of the normal operating season in order to use the men on other dredges where the crews became too small for proper operation. One inactive dredge, No. 5, was totally destroyed by fire on the morning of July 12th. Spring dredge repairs were started on March 27th and actual operations commenced on April 26th, when Dredge No. 7 at Quartz Creek began digging. The other dredges started shortly thereafter and all were in operation by May 15th. The dredging period extended to December 19th, when the last dredge, No. 3, was closed down. Below is a tabulation of data on the 1943 dredging operations.

Area No.	Location	Size Bucket Cu. Ft.	Operating Dates Started	 Ended	No. Days	Cu. Yds. Dredged
3	Lower Klondike	16	May 15	Dec. 19	219	2,142,666
4	Lower Bonanza	16	May 4	Nov. 23	204	2,400,290
7	Quartz Creek	5	Apr. 26	Oct. 6	164	480,686
10	Middle Dominion	7	May 1	Oct. 23	176	876,153
11	Middle Hunker	7½	Apr. 29	Nov. 1	187	967,719
	Total Cu. Yds. Dredged					6,867,514

Production

The total production for the year from dredging operations was 34,304.353 fine ounces of gold valued at $1,320,960.03 with gold at $38.50 per ounce, Canadian, and 7,676.69 fine ounces of silver valued at $2,963.23. The combined value was $1,323,923.26 and was taken from 6,867,514 cubic yards, which represented an average value of 19.28¢ per cubic yard dredged.

Shops and Transportation

The machine shop, electrical repair shop and automotive repair garage at Bear Creek were operated as in previous years, but with greatly reduced crews, owing to the general decrease in the amount of work required. All heavy freighting was done under contract by the McCormick Transportation Company.

Employment

Labour available for 1943 was approximately 30 of the amount required for full-scale operations. The company's 1943 operations were planned to fit the available labour supply but as the season progressed the supply gradually diminished and operations had to be curtailed accordingly. The average number of men employed by the company during 1943 was as follows.

January to March, inclusive	78
April to June, inclusive	181
July to September, inclusive	176
October to December, inclusive	126
Peak during the year,	197
Total man shifts worked,	50,831

A total of $498,617.02 was expended for salaries, wages and mess cost over-run.

Miscellaneous Expenditures

Expenditures for equipment and supplies not purchased locally amounted to $82,716.29, on which freight charges of $16,070.56 were paid. Local purchases amounted to $118,793.35, wood contracts amounted to $10,566.59, and the local freight charges amounted to $6,924.12.

The Holbrook Dredging Company

The Holbrook Dredging Company opened up a camp at the first of the season, but being unable to get an adequate operating crew, they did not start up the dredge on the upper Sixtymile River. Some repair work was done.

Clear Creek Placers, Limited

The Clear Creek Placers, Limited, operated their 3-cubic foot pontoon-type steel-constructed dredge on the Left Fork of Clear Creek from June 1st to October 14th, 1943. The total number of cubic yards of gravel dredged was 244,860. The total gold recovery was $137,242.95 at $38.50 per ounce, or 3,564.75 fine ounces of gold. The average number of men employed was 16.

The company also had a complete drag line outfit on their property which they proposed to operate when the necessary operating crew could be secured. The company maintained and improved thirty-seven miles of road extending from McQuesten airport on the Stewart River to the dredge, at a cost of $5,344.17. Of this amount, $2,000.00 was furnished by the Yukon Territorial Government.

Other Placer Operations

The more important individual operations in the Dawson area were the hydraulic operations of Colbourne and Osborn on Homestake Gulch, a tributary of Bonanza Creek, and those of Wilson, Townshend, Franich, and Bremner on Last Chance Creek. There were the usual summer mining operations on the older placer creeks in the Klondike and Sixtymile Districts by individual claim owners.

MAYO DISTRICT

In the Mayo District one new placer claim and 100 renewals were issued making 101 claims in good standing. There were also 14 miles of placer leases in good standing in the district.

Mining for placer gold and scheelite was continued on Dublin Gulch. The three operators there were assisted to some extent by the government. Messrs. Lunde and Swanson recovered sufficient scheelite and gold to make their operations successful, but Hugo Seaholm working farther up the Gulch was unsuccessful in developing a paying operation. Mr. Swanson worked the ground worked in 1942 by Mr. Taylor, and Mr. Lunde worked the ground worked jointly with Mr. Swanson in 1942. Both of these operators used the Haggart Mining Company bulldozer in previous years. Since this company did not operate in 1943, Messrs. Swanson and Lunde made arrangements with the territorial government for the use of the Road Department bulldozer. Otherwise they would have had no alternative but to discontinue their operations. Scheelite concentrate weighing 4,540 pounds was recovered from these operations and shipped to the War Time Metals Board at Vancouver for sale. It was reported that 565 ounces of gold were also recovered.

On Highet-Creek, Mr. Elmer Middlecoff operated his usual hydraulic mining operation and employed 4 men and a cook. An open cut 275 ft x 200 ft x 20 ft was taken out, and 450 ounces of crude gold were recovered.

In the Mayo Lake area there were three prospectors at work but all reported a poor season and very little gold recovered.

WHITEHORSE DISTRICT

In the Whitehorse District, three claims were restaked, and 22 claims were renewed, making a total of twenty-five placer claims in good standing. There were 39 miles of prospecting leases in good standing in the district. Two claims, and two leases were staked within the boundaries of Kluane Park Reserve by employees of construction companies engaged on defense projects in the area. The applications for recording were being considered, but had not been granted by early 1944. Royalty was paid on 181.86 ounces of gold in the District during the year.

Due to lack of labour, no new mining developments were made in 1943 on claims and leases in good standing. The Pioneer Gold Mines Limited held leases on Iron Creek, in the Alsek River district, and appeared to be satisfied with their holdings.

Messrs. Vass and McAuley held fourteen claims on Shorty Creek. They were unable to make much progress with their property during 1943 due to the illness of

Mr. McAuley.

No new claims were recorded in the Teslin, Carcross and Wheaton areas, and very little prospecting was carried out.

John Stenbraten, H. Berry and others prospected in the Livingstone Creek area. Four miles of prospecting leases were recorded.

CHAPTER 5.

MINERAL INDUSTRY OF YUKON, 1944

INTRODUCTION

Information on the mining industry in Yukon during 1944 was compiled from reports by G.A. Jeckell, Comptroller, and L. Higgins, Whitehorse Mining Recorder, and from correspondence of E.N. Patty, Clear Creek Placers Ltd., and C.E. McLeod, Yukon Consolidated Gold Corporation.

LODE MINING

There was a marked increase in new staking of lode claims during 1944. In the Dawson District, 77 new claims were recorded, and 144 claims were renewed. There were 52 new claims recorded in the Mayo District, and 258 claims were renewed. There were also 132 claims held under Crown Lease in the Mayo District. In the Whitehorse District, 89 new claims were recorded, 3 were restaked, 19 were renewed. Two coal leases were also held in good standing. The chief area of new staking in the Whitehorse District was approximately sixty miles east of Teslin, near Log Jam Creek in the Swift River Area, where 24 claims were recorded by the Hudson Bay Exploration and Mining Company. The Company planned to do extensive diamond drilling on the property in 1945.

Many mining companies and prospectors used the newly completed Alaska Highway as a means of access to potential mining areas. Mining companies which operated in the field from Whitehorse during 1944 included Consolidated Mining and Smelting Co. Ltd., Hudson Bay Exploration and Mining Co. Ltd., Pioneer Gold Mines of B.C. Ltd., International Nickel Company of Canada, Ltd., Anaconda Copper, Limited, and Richcamp Syndicate.

There was very little mining in 1944. Probably not more than 100 tons of shipping ore was produced during the season.

Assay Office

The assay office was maintained by the territorial government at Keno in the Mayo District. There were 936 samples of rock received from all parts of the territory, and 1,451 assays or quantative analyses were made. In addition, qualitative analyses and chemical tests were made in connection with identification and classification of various rocks and minerals of which no record was made. Assays made were gold and silver 936, lead 494; zinc 13, and copper 8.

PLACER MINING

The amount of placer gold mined during 1944 in the territory, on which royalty export tax was paid was 29,411.34 ounces, produced as follows; 28,988.46 ounces, Dawson District, 272.00 ounces, Mayo District, and 150.88 ounces, Whitehorse District. Total gold production for the territory was 23,442.24 ounces less than for the previous year. The decrease was due to the closing of additional dredges due to the scarcity of labour.

There were 2,725 placer claims in good standing, an increase of 101 from 1943. One hundred prospecting leases covering 322 miles were issued in 1944, an increase of 174 miles over 1943. There were 78 new leases to prospect covering 254 miles issued during the year, and 22 leases covering 71 miles were renewed.

DAWSON DISTRICT

In the Dawson District, 106 new placer claims, 17 restaked claims, and 2,499 renewals were issued, representing 2,572 placer claims in good standing. Three dredging leases covering twenty-three miles were renewed and one new dredging lease covering ten miles was issued. Fees for the renewal of four hydraulic leases were paid. Prospecting leases covering 263 miles were issued in the district during 1944.

Yukon Consolidated Gold Corporation, Limited

Property

Annual renewal, recording and grouping fees in the amount of $17,793.80 were paid to the government to maintain all property owned and controlled in good standing, including 4 dredging and hydraulic leases, 1,546 placer claims, and 24 lode claims.

Power Generation and Transmission

The hydro-electric power plant, located on the North Fork of the Klondike River, operated without interruption during 1944. Very little improvement work was carried out, but the South Fork Ditch was widened for 1½ miles in the vicinity of Lee Creek, and gravel hauled to build up the ditch bank. Of the 18,197,200 kilowatt-hours generated, 9,503,900 kilowatt-hours, or 52.23% were used by the company in its mining operations, 5,498,700 kilowatt-hours were sold to the Dawson Electric Light and Power Company, 1,366,700 kilowatt-hours were used in power plant operations, and 1,827,900 kilowatt-hours were consumed in line loss.

Hydraulic Stripping

Shortage of labor again limited the ground preparation program, though above average rainfall gave a good supply of water in the creeks all season. Stripping operations were carried on with small crews at stripping plants No. 7 on Quartz Creek, No. 10 on Dominion Creek, and No. 11 on Hunker Creek. A summary of the stripping operations follows.

Plant No.	Operating Dates Started	Ended	Water Season Days	M.I.D. Water Used	Duty of Water	Cu. Yds. Muck Removed
7	June 6	Sept. 23	104	21,082	10.0	211,435
10	May 29	Sept. 24	125	34,806	11.8	409,519
11	May 20	Sept. 27	130	33,998	11.6	395,990
Totals				89,886	11.3	1,016,944

The crews were kept busy an additional two weeks preparing pump positions for the 1945 season.

Cold Water Thawing

No cold water thawing was done in 1944. A small amount of steam thawing was done ahead of Dredge No. 7 to give it a good start in the spring of 1945.

Dredging

Three Dredges, Nos. 3, 4 and 7 were operated throughout the season. No. 10 Dredge was operated for a short time with the crew from No. 7 to clean out its pond, and to get it in a better position than it was. All three dredges were working in low grade gravel so production was not high. No. 4 Dredge operated in an area covered by deep hydraulic tailings. It was digging over 50 feet below the pond level and was carrying an 80 foot bank on the starboard side. Below is a tabulation of data on the 1944 dredging operations.

Dredge No.	Location	Operating Dates Started	Ended	No. Days	Cu. Yds. Dredged
3	Lower Klondike	May 5	Nov. 17	196	1,783,334
4	Lower Bonanza	May 2	Oct. 30	181	2,033,154
7	Quartz Creek	Apr. 29	Nov. 1	182	519,024
10	Dominion	June 15	June 19	4	13,362
	Total Cu. Yds. Dredged				4,348,874

Production

The total production for the year amounted to 21,013.11 ounces of partly refined gold (in bricks), with a value of $619,822.80. This included 112.75 ounces valued at $3,326.25 from lays.

Shops and Transportation

The machine shop, electrical repair shop and automotive repair garage at Bear Creek were operated with reduced crews, about the same as in 1943. All heavy freighting was done under contract by the McCormick Transportation Company.

Employment

The Company's operations continued to be hampered by lack of labour. The average number of men employed by the Company during 1944 was as follows.

January to March	64
April	137
May to September	167
October	143
November	104
December	67
Peak during the year in August	174

Total man shifts worked 43,900

A total of $413,319.00 was expended for salaries and wages. The number of men required for full scale operations was 700.

Miscellaneous Expenditures

Expenditures for equipment and supplies not purchased locally amounted to $101,938.59, on which freight charges of $20,319.25 were paid. Local purchases amounted to $76,399.64, wood contracts to $7,154.18, and local freight charges to $3,831.35. Fire insurance costs were $29,358.88.

Clear Creek Placers, Limited

The Clear Creek Placer, Limited, operated one dredge on the Left Fork of Clear Creek, and had a very successful season with production amounting to about $190,000.00. The company planned to not expand their operations in this area until there was an available labour supply, to continue operations at Clear Creek in 1945 on about the same basis as in 1944. The company also planned a development program in other areas. During the summer of 1944 they optioned large areas on Matson, Thistle, Barker and Rosebute Creeks. They had a crew on Matson Creek during the winter of 1944-1945 putting down from twenty to thirty prospecting shafts, to be followed by drilling if prospects were satisfactory.

Other Placer Operations

The Numalake Mining Company, Limited, was active in prospecting on Scroggie Creek during 1944. This company optioned additional ground on Scroggie Creek and its tributaries, and on Maisy May, Moose, Bear, Boucher, and other creeks. They planned active prospecting in 1945. There were also the usual summer placer mining operations of individual miners on other creeks. These were also hampered by lack of labour.

MAYO DISTRICT

In the Mayo District, five new placer claims, one restaked claim, and 87 renewals were issued during 1944, making 93 placer claims in good standing. There were also thirteen miles of placer leases in good standing in the district.

Placer mining continued on a small scale in 1944. Mr. Vilhelm Lunde continued his operation on Dublin Gulch, but Messrs. Swanson and Seaholm who operated there in 1943 were not active. Mr. Middlecoff continued his hydraulic operations on Highet Creek. Gold production from the Mayo area in 1944 was 272.00 ounces, or 258.50 ounces less than in 1943.

WHITEHORSE DISTRICT

In the Whitehorse District 38 new placer claims, 3 restaked claims, and 19 renewals were issued, making a total of 60 claims in good standing. There were also 46 miles of placer leases in good standing in the district.

Little actual mining was carried out during the year due to lack of labour. Pioneer Gold Mines Ltd. on Bates and Iron Creeks near the Alsek River constructed a road from the Haines Cutoff to their properties, with the assistance of the territorial government, and installed some machinery.

Messrs. Vass and McAuley, who held 14 claims on Shorty Creek, were unable to perform any work due to labour conditions and the lack of suitable mining machinery.

CHAPTER 6.

MINERAL INDUSTRY OF YUKON, 1945

INTRODUCTION

Reports by G.A. Jeckell, Comptroller, S.M. Wood, Mayo Mining Recorder, and the Whitehorse Mining Recorder, and correspondence of W.H.S. McFarland, general manager of Yukon Consolidated Gold Corporation provided information on the mining industry in Yukon in 1945.

LODE MINING

There was an increase of new staking of lode claims in the Dawson and Mayo Districts during 1945. In the Dawson District, 185 new claims were recorded, and 209 claims were renewed. There were 77 new claims recorded in the Mayo District, and 308 claims renewed. In the Whitehorse District, 36 new claims were recorded, and 64 were renewed. Hard rock prospecting was quite active along the Alaska Highway, and in areas made accessible by newly opened roads and secondary roads. One group of 32 new claims was staked adjoining a previous discovery on the Aishihik Road at the north end of Canyon Lake. Another group of claims was staked in the Sheep Creek area, just off the Alaska Highway. Consolidated Mining and Smelting Company carried out extensive prospecting in the district, with headquarters in Whitehorse.

Improved transportation facilities undoubtedly served to encourage development work in areas previously inaccessible. Hudson's Bay Exploration and Development Company, Limited, with operations located at the headwaters of Logjam Creek, a tributary of the Swift River, showed the greatest activity. Their 24 claims were renewed, and 21 new claims were staked. Drilling was begun during the summer, and a second drill was taken in during the winter. Renewed activity occurred in the Windy Arm area on Tagish Lake, where abandoned ground was restaked. Survey work was carried out by Transcontinental Resources, Limited, preparatory to drilling on the property. Some tunneling was carried out on a group of four claims at the north end of Loon Lake in the Livingstone Creek area, and three new claims were located in the vicinity. Enquiries at the Mining Recorder's office during the year indicated renewed interest in the Wheaton River area.

In the Mayo District, a new company, the Keno Hill Mining Company, Limited, acquired all the properties of the Treadwell Yukon Corporation, Limited on Keno Hill and Galena Hill, and also other claims in the same areas. They planned to operate these properties in 1946. Another new company, known as the Yukon Northwest Exploration Company, acquired claims on Keno Hill and planned to develop these in 1946.

There was very little mining in 1945 About 100 tons of high grade ore were shipped from the Mayo area by a few individual miners. No new lode mining operations were started during the year.

Assay Office

The assay office was maintained by the territorial government at Keno. There were 998 samples of rock received from all parts of the territory and 1,309 assays or quantitative analyses were made. In addition, qualitative analyses and chemical tests were made in connection with identification and classification of various rocks and minerals, of which no record was kept. The assays made were gold and silver 998, lead 287, copper 10, zinc 13, nickel 1.

PLACER MINING

The amount of placer gold recovered during 1945 in the territory, on which royalty export tax was paid was 40,049.99 ounces, produced as follows: 38,764.50 ounces, Dawson District, 303.75 ounces, Mayo District, and 981.74 ounces, Whitehorse District. Total gold production was 10,638.65 ounces more than for the previous year.

The production consisted mainly of gold from the operations of the Yukon Consolidated Gold Corporation, Limited, and the Clear Creek Placers, Limited one dredge. In Mayo District the gold production was smaller than in previous years, but in the Whitehorse District there was increased production resulting mainly from the operations of Barker and Ray Limited on Shorty Creek.

There were 2,734 placer claims in good standing in 1945. Prospecting leases covering 525 miles were issued during the year, an increase of 200 miles over 1944. Many individuals were engaged in prospecting for placer gold throughout the territory. The most notable discovery was in the Nansen Creek area.

DAWSON DISTRICT

In the Dawson District, new claims, restaked claims, and renewals totalling 2,509 claims were issued during the year. Prospecting leases covering 342 miles were also issued.

Yukon Consolidated Gold Corporation, Limited

Property

Annual renewal, recording and grouping fees amounting to $17,714.80 were paid to the government to maintain all property owned and controlled in good standing including 4 dredging and hydraulic leases, 1,566 placer claims, and 33 lode claims.

Power Generation and Transmission

The hydro-electric power plant, on the North Fork of the Klondike River, operated without interruption throughout 1945. Improvement work on the ditches, which was limited because of a shortage of labor, consisted of hauling material for the road on the lower bank of the South Fork Ditch, and for reinforcing the lower bank of that ditch. Of the 17,586,800 kilowatt-hours generated, 8,755,500 kilowatt-hours, or 49.8% were used by the company in its mining operations, 5,955,900 kilowatt-hours were sold to the Dawson Electric Light and Power Company, 1,356,800 kilowatt-hours were used in power plant operations, and 1,827,900 kilowatt-hours were consumed in line loss.

Hydraulic Stripping

Shortage of labor again restricted the ground preparation program. The amount of water available for stripping operations was greater than average but much of it had to be wasted because of labor shortage. Small stripping plants were operated on Quartz Creek (No. 7), Middle Sulphur Creek (No. 8), Middle Dominion Creek (No. 10) and Middle Hunker Creek (No. 11). A summary of the stripping operations follows.

Plant No.	Operating Dates Started	Operating Dates Ended	Water Season Days	M.I.D. Water Used	Duty of Water	Cu. Yds Muck Removed	Average No. of men Employed
7	June 27	Sept. 22	88	13,389	10.3	137,901	5
8	May 20	Sept. 26	130	29,182	13.7	400,206	12
10	May 26	Sept. 29	127	32,884	12.4	407,595	13
11	Aug. 27	Sept. 24	28	5,793	15.9	92,408	9
Total				81,248	12.8	1,038,110	39

A large part of the water used at plants Nos. 7 and 8 was used on areas which had been opened up in former years but on which additional stripping was required to put the ground in proper condition for dredging. This meant that much heavy material had to be moved in order to get at the underlying muck. At No. 10 a good part of the area was covered with old drift and opencut tailings which had to be moved by bulldozer before the underlying muck could be stripped off with water. At No. 11 the work was confined to removing muck from an area which had been thawed during the summer.

Cold Water Thawing

A small thawing plant was operated ahead of Dredge No. 7 on Quartz Creek during the first part of the season and another small plant was operated for the greater part of the season ahead of Dredge No. 11 on Middle Hunker Creek. The work is summarized below.

Dredging

Three dredges, Nos. 3, 7 and 11 were operated during the season. Dredge No. 3 operated on the Lower Klondike River in an area at the toe of the Jackson Gulch hydraulic tailings pile. It was continually hampered by an excess of sand and sometimes encountered hard bottoms. These factors, coupled with the dredge's extreme age, made for a low seasonal yardage. Dredge No. 7 operated on Quartz Creek near the mouth of Calder Creek. In the early part of the season it had to pass over an area of high bedrock which caused difficulty in maintaining flotation. It was necessary to build dams ahead of the dredge to increase the depth of the pond. Dredge No. 11 operated on Middle Hunker Creek and had good operating conditions throughout the season. It worked partly in ground which had previously been drifted and partly in ground which had been dredged by another company. A summary of 1945 dredging operations is below.

Plant No.	Operating Dates Started	Operating Dates Ended	Water Season Days	M.I.D. Water Used	Cu. Yds. Thawed	Duty of Water
7	May 20	June 22	34	6,473	109,550	16.9
11	May 25	Aug. 16	84	54,644	367,506	6.7
Totals				61,117	477,056	7.8

Dredge No.	Location	Operating Dates Started	Operating Dates Ended	Days Operated	Cu.Yds. Dredged
3	Lower Klondike	May 12	Nov. 16	188	1,452,709
7	Quartz Creek	May 11	Oct. 14	156	379,703
11	Middle Hunker	May 10	Nov. 12	186	850,331
	Total cubic yards dredged				2,682,743

Production

The total production for the year amounted to 30,306 ounces of partly refined gold in bricks with a value of $918,441.82. This included 81.80 ounces valued at $2,478.91 from lays.

Shops and Transportation

The machine shop, electrical repair shop, and automotive repair shop were again operated with reduced crews. The average number of men employed was machine shop, 12; electrical repair shop, 6; and automotive repair shop, 4. All essential repair work was completed. All heavy freighting was done under contract by the McCormick Transportation Company.

Employment

The Company's operations continued to be restricted by shortage of labor but the situation was slightly better than in 1944. The following tabulation shows the average number of men employed each month during the year, the total man-shifts worked and the total amount expended for salaries and wages.

January	62	July	183
February	66	August	176
March	87	September	165
April	142	October	149
May	175	November	111
June	179	December	67

Peak during the year (July)	186
Total man-shift worked	45,822

A total of $439,190.72 was expended for salaries and wages.

Miscellaneous Expenditures

Expenditures for equipment and supplies not purchased locally amounted to $85,149.36, on which freight charges of $19,762.36 were paid. Local purchases amounted to $86,592.05, wood contracts to $11,225.36, and local freight charges to $6,009.55. Fire insurance costs were $28,047.90.

Other Placer Operations

In prospecting, several new mining companies entered the field. The Yukon Alluvial Golds Limited, allied to Clear Creek Placers Limited, carried on active drilling programs on Barker Creek and on Thistle Creek. Drilling on Barker Creek did not produce satisfactory results and the drill was moved to Thistle Creek. This prospecting proved sufficient values such that the company planned to install a dredge on Thistle Creek in 1946. The same company planned to install another dredge on Henderson Creek, in 1946.

The Numalake Mining Company continued their prospecting by drilling on Scroggie Creek, but did not prove sufficient values to warrant further development.

The Sunshine Mining Company of Idaho did some test drilling on Big Gold, Glacier and Sixtymile Creeks. They took up options on the properties, and mapped out a program of development for the future.

MAYO DISTRICT

In the Mayo District, 6 new placer claims, and 99 renewals were issued, making a total of 105 placer claims in good standing. There were also 26 miles of placer leases in good standing in the District.

Placer mining continued on a small scale in 1945. Gold production from the District during the year was 303.75 ounces, slightly higher than in 1944.

WHITEHORSE DISTRICT

The Whitehorse District experienced a remarkable increase in placer prospecting and mining activity during 1945. There were 81 new placer claims and 39 renewals issued, making a total of 120 claims in good standing, double the number of claims held only one year previously. There were also 45 new placer leases covering 121 miles granted during the year, and 13 leases covering 36 miles were renewed. This compares with only 19 miles of new leases granted, and 27 miles of leases renewed during 1944. Royalty payments were made on 981.74 ounces of gold, compared to 150.88 ounces in 1944.

Prospects of an improved labour situation and of an increase in supply of machinery served to inspire operators to do more extensive development work. Several new companies operated in the District, notably, Numalake Mines, Limited, with leases on both the Duke River and Gladstone Creek, Bates Creek Placers, Limited, with holdings in the Bates River-Iron Creek area, Burwash Placers, Limited, with operations on Burwash Creek, and Cyr Creek Placers, with a group of claims on Cyr Creek, a tributary of Gladstone Creek.

Messrs. Barker and Ray made good progress with their operation on Shorty Creek and acquired prospecting leases to extend their operations to Mush Creek in the near vicinity. Messrs. Keobke and Emmenger were preparing equipment for renewed activity in the Ruby Creek area. Messrs. Andrews and Comeau acquired ground on Willie Creek, a tributary of Primrose River and proposed to open this new area by extensive prospecting during the 1946 season.

A double discovery and 21 claims were staked by individuals during 1945 on Florence Creek, a tributary of the Nordenskiold River. Additional prospectors were making arrangements to proceed to this area immediately after break-up in 1946.

CHAPTER 7.

MINERAL INDUSTRY OF YUKON, 1946

INTRODUCTION

Information on the mineral industry in Yukon in 1946 was compiled from reports of J.E. Gibben, Acting Comptroller, G.A. McIntyre, Mayo Mining Recorder, and the Whitehorse Mining Recorder. Additional information came from correspondence of Transcontinental Resources Ltd., Yukon Gold Placers, Ltd., Yukon Exploration Ltd., and W.H.S. McFarland, and C.E. McLeod, both of Yukon Consolidated Gold Corporation.

LODE MINING

Prospecting activity increased again in the Territory during 1946. Claim staking increased in all Districts. In the Dawson District, 427 new claims were recorded, and 279 claims were renewed. There were 195 new claims recorded in the Mayo District, and 409 claims were renewed. There were also 150 leases in the Mayo District. In the Whitehorse District, 204 new claims were recorded, and 86 were renewed.

Development work was done in all Districts. Underground work was done in the Mount Nansen area, where lode gold had been discovered. Surface and underground work was done at several properties along the Alaska Highway. Mining and production of lead-silver concentrate were begun by Keno Hill Mining Company, Limited, which had purchased the assets of Treadwell Yukon Mining Corporation. Development work was also done by a number of other companies at properties in the Keno Hill-Elsa area.

DAWSON DISTRICT

Much of the mineral exploration in the Dawson District concentrated on the newly discovered lode gold occurrences of the Mount Nansen area in 1946. A winter road from the Alaska Highway through Aishihik to the Victoria Creek and Nansen Creek areas facilitated the transportation of equipment and supplies for drilling and tunneling operations at the Brown-McDade Mines, Ltd., Conwest Exploration, Nansen-Yukon Mines Ltd., Huestis Prospecting Syndicate and Coleray-Yukon Mines Ltd. properties.

MAYO DISTRICT

Keno Hill Mining Company, Limited, made very satisfactory progress during the year in spite of difficulties in obtaining supplies, equipment, and labour. A 100 ton-per-day mill was set into operation at 50% of capacity, and was producing 5 tons of concentrate per day. During the winter of 1946-1947, 49 tons of high-grade ore were also produced.

Mayo Mines, Limited, prospected the "Rio" Group of claims, and drove some eighty feet of tunnel. The last fifteen feet were reported to be in milling grade ore. Ten men were employed on the project.

Yukon Northwest Explorations Limited, carried on with a limited amount of development work on their "Blue Rock" holdings on Keno Hill, and their "Keno" holdings on Galena Hill. Several men were employed cleaning out old workings on the "Keno" group, and uncovered promising ore. It was rumored that the property would be turned over to Mayo Mines who were tunneling the adjacent property.

Clarence Bleiber with one man employed prospected the "Homestake" property on Bunker Hill with negative results. Charles Brefalt et al worked on the "Vanguard" property. High-grade ore encountered there pinched out after a small amount was sacked. It was doubtful if the returns on the ore mined would pay for the costs of the operations.

Assay Office

The assay office was maintained by the territorial government at Keno. There were 851 samples of rock received from all parts of the territory, and 1,179 assays or quantitative analyses were made. In addition, qualitative analyses and chemical tests were made in connection with identification and classification of various rocks and minerals of which no record was kept. The assays made were gold and silver, 851; lead, 303; copper, 14; zinc, 10; and manganese, 1.

WHITEHORSE DISTRICT

Hudson Bay Exploration and Development Co., Ltd., completed their drilling in the Upper Logjam Creek area where 44 claims were staked. Western Ranges Prospecting Syndicate, (Ventures), carried on their activities along the Alaska Highway by special trucks under direction of Dr. D.R. Derry. Claims were staked adjoining the Hudson Bay Exploration property at Logjam Creek and Swift River, in the Wheaton area, and in the Dawson District.

Captain T.E. Noon commenced prospecting work on a group of 41 claims held by himself and associates in the vicinity of Aishihik Lake. A previously abandoned gold showing in the vicinity of Moraine Lake, just north of Champagne, was re-staked with 81 claims covering it, and active prospecting was carried out.

Twenty-three claims were staked by Whitehorse interests over a copper deposit in Hutshi Valley adjoining a group of Crown Granted mineral claims. A property held by J. Strenbraten in the Loon Lakes area was also prospected, but results of the work were not known.

Transcontinental Resources, Limited held 26 claims on the western shore of Windy Arm, Tagish Lake under option. A five-man exploration crew was on the property from April until August, 1946, and carried out a geological reconnaissance program, and sampled old underground workings. The work indicated the deposit could not be mined at a profit under prevailing conditions, but the company retained its option on the property.

Four coal leases were held in the district during the year.

PLACER MINING

The amount of placer gold recovered during 1946 in the territory, on which royalty export tax was paid, was 57,065.48 ounces, produced as follows: 54,233.18 ounces, Dawson District, 609.75 ounces, Mayo District, and 2,132.55 ounces, Whitehorse District. Total gold production was 17,015.49 ounces more than for the previous year. Almost 84% of the gold recovered was from the Dawson area operations of Yukon Consolidated Gold Corporation, Limited.

There were 2,667 placer claims in good standing in 1946. Prospecting leases covering 446 miles were issued during the year, a decrease of 79 miles from 1945.

DAWSON DISTRICT

In The Dawson District, new claims, restaked claims, and renewals totalling 2,463 claims were issued during the year. Prospecting leases covering 275 miles were also issued.

Yukon Consolidated Gold Corporation, Limited

Property

Annual renewal, recording and grouping fees amounting to $17,834.30 were paid to the government to maintain all property owned and controlled in good standing, including 4 dredging and hydraulic leases, 1,567 placer claims, and 33 lode claims.

Power Generation and Transmission

The hydro-electric power plant on the North Fork of the Klondike River operated without serious interruptions to power throughout 1946. Improvement work on the power ditches was limited because of shortage of labor and consisted of reinforcing the lower bank of the South Fork ditch and some repair work to the bank at the intake of the North Fork ditch. Of the 28,768,400 kilowatt-hours generated, 18,415,600 kilowatt-hours, or 64.0% were used by the company in its mining operations, 6,366,700 kilowatt-hours were sold to the Dawson Electric Light and Power Company, 1,317,900 kilowatt-hours were used in power plant operations, and 2,668,200 kilowatt-hours were consumed in line loss.

Hydraulic Stripping

Shortage of labor again restricted the program for preparation of ground. Although 1946 was a good water season, much of the supply could not be used. Stripping plants were started at Nos. 6 (Lower Sulphur), 7 (Quartz Creek), 8 (Middle Sulphur), 9 (Upper Sulphur), 10 (Middle Dominion), and 11 (Middle Hunker), but work at No. 9 had to be shut down after a short run so the men could be shifted to more urgent work. All stripping at Quartz Creek was completed for the life of the dredge. The duty of the water was low at Quartz Creek and Middle Hunker Creek due to the fact that stripping depths were relatively shallow and much heavy material had to be shifted to get at the removable muck. The condition at Middle Hunker Creek was further complicated by the presence of sand from the old hydraulic operations on Paradise Hill. A summary of the stripping operations follows.

Plant No.	Operating Dates		M.I.D. Water Used	Duty of Water	Cu. Yds. Muck Removed
	Started	Ended			
6	May 28	Sept. 24	34,250	16.3	559,453
7	May 18	Sept. 16	15,281	8.6	131,945
8	June 5	Sept. 24	37,465	16.2	605,785
9	June 2	July 6	6,217	26.0	161,567
10	May 19	Sept. 26	32.431	12.0	388,958
11	May 11	Sept. 28	35,640	8.2	290,946
Totals			161,284	13.3	2,138,654

Cold Water Thawing

Thawing plants were operated at Nos. 6, 7, 8, 10 and 11. The following tabulation shows the thawing work accomplished.

Plant No.	Operating Dates Started	Operating Dates Ended	M.I.D. Water Used	Cu. Yds. Material Thawed	Duty of Water
6	May 18	Sept. 20	113,505	501,372	4.4
7	May 12	Sept. 24	66,990	503,993	6.5
8	May 10	Sept. 18	132,987	563,731	4.2
10	May 10	Sept. 18	97,768	752,035	7.7
11	May 9	Sept. 21	100,881	547,411	5.4
Totals			512,131	2,868,542	5.6

Dredging

Five dredges were operated throughout the season and a sixth, No. 7, commenced digging on July 2nd. Because of the high cost of construction and the difficulty of obtaining steel and other materials it was deemed advisable not to place an order for a dredge to replace No. 5 which was destroyed by fire in 1943.

Dredge No. 3 worked in an area on the Klondike River covered by the toe of the Jackson Gulch hydraulic tailings. Its operations were handicapped by an excess of sand and muck. Dredge No. 4 resumed work on Bonanza Creek at the mouth of Lovett Gulch. The area worked was covered by a deep deposit of hydraulic tailings which made the total depth of ground to be handled about 90 feet. Dredge No. 7 worked downstream on Quartz Creek and had good digging. Dredge No. 8 resumed digging at Middle Sulphur. During its idle period, a great deal of sand and mud had sluiced into the pond and much difficulty was experienced in cleaning this out and re-establishing the cut. Otherwise, good digging was encountered. Dredge No. 10 resumed digging at Middle Dominion. In general, it had good digging but did encounter some very hard bedrock. It also encountered some gumbo bedrock, which did not wash well but in which there was little of value. Dredge No. 11 continued to operate at Middle Hunker in ground which had been partly drifted and partly dredged by a former company. It encountered good digging throughout the season. A summary of 1946 dredging operations is below.

Dredge No.	Location	Operating Dates Started	Operating Dates Ended	Days Operated	Cu. Yds. Dredged
3	Lower Klondike	May 10	Nov. 17	191	1,508,752
4	Lower Bonanza	May 4	Oct. 25	174	1,426,433
7	Quartz Creek	July 2	Oct. 28	179	375,608
8	Middle Sulphur	May 14	Nov. 13	183	689,755
10	Middle Dominion	May 15	Nov. 15	184	713,599
11	Middle Hunker	May 1	Nov. 3	186	900,553
			Total cubic yards dredged		5,614,700

Production

The total production for the year amounted to 47,691.58 ounces of partly refined gold in bricks with a value of $1,364,664.02. This included 59.71 ounces valued at $1,708.77 produced from small lays. The balance was produced by the dredges and by a small dragline operation.

Shops and Transportation

The machine shop, electrical shops, and automotive repair shop were operated for the benefit of the company's operations. All essential repairs were completed. All heavy freighting was done under contract by the McCormick Transportation Company.

Employment

The labour situation throughout the operating season was very unsatisfactory. Less work was accomplished than had been estimated. The labour force reached a peak of 406 on 25th May, and dropped to 366 by 29th June, to 341 by 27th July and to 310 by 31st August. This steady loss of men had a disrupting effect on the operations, making it necessary to discontinue work that had been got under way in the stripping and thawing departments. As a result the full benefit of the work done could not be realized and costs were high.

The following tabulations shows the average number of men employed each month during the year, the total man-shifts worked and the amount expended for salaries and wages.

January	65	May	301	September	301
February	66	June	375	October	270
March	80	July	353	November	152
April	238	August	318	December	83

Peak during the year (May)	406
Total man-shifts worked	83,510

A total of $804,077.13 was expended for salaries and wages.

Miscellaneous Expenditures

Expenditures for equipment and supplies not purchased locally amounted to $132,466.04, on which freight charges of $35,825.14 were paid. Local purchases amounted to $316,034.49.

Yukon Explorations Limited

Yukon Explorations Ltd. was incorporated in 1946 to take over the assets of Sunshine Mining Company (Yukon Division). The company held 113 claims under lease, and had options on 62 miles of prospecting leases, all in the Sixtymile River drainage area. During the year, they moved 400,000 cubic yards of overburden in preparation for dredging. Production was nil. The average work force at the camp on Big Gold Creek was 25 men. It was anticipated that forty men would be employed during 1947, and that production would begin by September.

Yukon Gold Placers, Limited

Yukon Gold Placers, Limited, formerly the Yukon Alluvial Golds, Limited continued operations at camps on Thistle Creek and Henderson Creek, each approximately 18 miles from the Yukon River., There were 26 men at each camp employed in preparing for the installation and operation of new steel-hulled dredges which were expected to begin production in 1947. In addition, 12 men were employed in prospect drilling on Thistle Creek, and 6 were employed in prospect drilling on Rosebute and Kirkman Creeks.

Clear Creek Placers, Limited

Clear Creek Placers, Limited operated from April until November 1st in 1946. During the peak of the season, 24 men were employed. The dredge operated for 142.6 days, and handled 303,040 cubic yards of material. There were 2,706.56 fine ounces of gold produced. In addition to mining, the company constructed an air strip, and did a considerable amount of road work.

Other Placer Operations

Several individuals including P.E. McNee and G. Dickson prospected ground in the Nansen Creek, Victoria Creek and Bow Creek areas. They operated out of Whitehorse into the Dawson District, along the new winter road from the Alaska Highway through the Aishihik Lake area to Victoria and Nansen Creeks.

MAYO DISTRICT

In the Mayo District, 6 new placer claims, and 126 renewals were issued, making a total of 132 placer claims in good standing. There were also 12 miles of placer leases in good standing in the district. Royalty was paid on 609 oz. 7 dwt. of gold in Mayo during 1946.

Mr. Fred Taylor operated on Dublin Gulch with five employees during 1946. With a bulldozer, and gas operated derrick, they produced 608 ounces of gold.

Edwin and Clarence Bleiler operated on Highet Creek on a small scale during 1946. They shipped their gold through the bank in Dawson City, so it did not appear in the royalty records of the Mayo District.

WHITEHORSE DISTRICT

There were 31 new placer claims, and 41 renewals issued, making a total of 72 claims in good standing in 1946, much less than the 120 claims in good standing in 1945. The figures were biased, however, by an Order-in-Council laying over renewal of claims until July 15, 1947. There were also 62 miles of ground covered by 28 new placer leases, and 22 leases covering 61 miles were renewed prior to the issuance of the Order-In-Council. Leases in good standing covered 159 miles.

Increased placer production resulted in royalty being collected on 2,132 oz. 11 dwt. of gold, compared to 981 oz. 15 dwt. in 1945, and 150 oz. 18 dwt. in 1944. Most of this gold was produced on Shorty and Burwash Creeks. In addition, there were 97 ounces produced and consumed in local manufacture, on which no royalty was collected.

General prospecting activities throughout the Whitehorse District remained about the same as in 1945, although more effort was made in developing holdings than in searching for new ground. New methods and heavier machinery were being introduced in some areas. Labour conditions were improving, but there was still difficutly in obtaining skilled heavy machinery operators.

Among the more important operators, were Barker and Ray on the McCauley and Vass ground on Shorty Creek, Burwash Mining Co. Ltd., operating on their own ground, and on Walsh and Mullett ground on Burwash Creek, Kluane Dredging Co. Ltd., operating on the Proctor ground on Burwash Creek, and Frank MacDougall (Bates Creek Placers Ltd.) operating on Mrs. MacDougall's lease on Bullion Creek. Several options were pending on other Creeks in the Kluane area.

Numalake Mines was reported to have dropped its option on the Duke River owing to heavy commitments elsewhere. Cyr Creek Placers were inactive on their property. John Stenbratten continued his operations on Livingstone Creek, and staked his 2 mile prospecting lease into 15 claims. Wm. McComb constructed a special river boat, and a portable concentrator for recovery of fine gold, and established a base on the Teslin River from which to operate.

CHAPTER 8.

MINERAL INDUSTRY OF YUKON, 1947

INTRODUCTION

Reports by J.E. Gibben, Commissioner, and correspondence from MacLeod White, manager, Yukon Consolidated Gold Corporation, F.L.C. Price, managing director, Yukon Explorations Limited, and J.K. Halley, engineer for Yukon Gold Placers Limited and for Clear Creek Placers Limited provided information on the mineral industry in Yukon in 1947.

LODE MINING

A shift in boundaries of Mining Districts in 1947 transferred an area in the Dawson Range from the Dawson Mining District to the Whitehorse Mining District. Mineral exploration activity was high in the transferred area, as well as numerous other areas throughout the territory.

New staking of lode claims in 1947 continued at the 1946 level in the Dawson and Mayo Districts, but increased dramatically in the Whitehorse Districts. In the Dawson District, 432 new claims were recorded, and 77 claims were renewed. There were 118 new claims recorded in the Mayo District, and 362 claims were renewed. There were also 143 leases in good standing in the Mayo District. In the Whitehorse District, 512 new claims were staked, and 527 claims were renewed.

Mining activity increased at United Keno Hill Mines Limited during 1947, and more concentrate was produced than in any year since 1939. Development work and a little mining were also done at several other properties in the Elsa-Keno Hill area during the year.

DAWSON DISTRICT

Exploration activity was high in the Mount Nansen and Mount Freegold areas during 1947. Part of the region formerly within the Dawson District, including the Mount Nansen and Mount Freegold areas, became part of the Whitehorse District through a boundary change on July 1. Activities in those areas during 1947 are therefore summarized under "Whitehorse District", in this report.

MAYO DISTRICT

There was a significant increase in activity on known mineral occurrences in the Mayo area during 1947.

United Keno Hill Mines, Limited

This company had extensive holdings on both Keno and Galena Hills, but confined its 1947 activities to Galena Hill. In March, 1947, there were 90 men employed, and the 100 ton-per-day mill was operating at 50 of capacity, producing 5 tons of concentrate per day. One year later, there were 170 on the company's payroll, and the rate of production had increased so that 3,662.28 tons of high-grade ore, with an estimated value of $842,338.95, were produced during the year. Tonnage shipped to the smelter during the year was 1,305.44 tons, with an estimated value of $343,587.99. Hector-Calumet and Elsa were the producing properties.

Development work was carried out at the Silver King to intersect the strike of the Silver King vein on the west side of the claim by means of a crosscut. Old workings on the No Cash were cleaned out. Rehabilitation of the Elsa Mine was done, and two stopes were brought into production. One diamond drill was employed continuously in exploration work. Prospecting was not done, but representation work on claims held under yearly renewal was done.

Mayo Mines Limited

This company was formed to prospect certain properties optioned originally to J.R. O'Neill. He, in turn, disposed of his options to Noranda, and Mayo Mines was the outcome. Properties involved included Mrs. A.J. Kinsey's Wigwam-Coral group, Alex Gordon's Sourdough Hill group, W.C. Sime's Rio group, and assorted other claims. Considerable work was done on the Rio group but no ore of any account was uncovered. All options were returned to J.R. O'Neill. During 1947, the company was interested only in the "Ram" mineral claim on Sourdough Hill, which it owned outright. There was reported to be a fair showing in the bottom of the shaft on the claim. Roy Martin, field man for Noranda, and Mayo Mines, worked on the property to prepare it for a lessee.

Yukon Northwest Explorations Limited

Yukon Northwest Explorations Ltd. held options on the Milosevich-Besner properties on Keno Hill. An exploration tunnel was driven without proving or disproving the property as it was not completed due to high transportation costs. The options were dropped early in 1948. Exploration work on Angus McLeod's Keno group on Galena Hill was also done. Although work was discontinued early in 1948, the company retained the option.

Other Lode Operations

Mr. Bermingham worked over the dump of the Bermingham-Settlemier Arctic group and made a small shipment. C.A. Bleiler carried out development work on the property. Negotiations began for the optioning of the group by United Keno Hill, but the death of C.R. Settlemier delayed completion of the option.

Charles Brefalt continued working on Mr. Nicol's Vanguard property on Charity Gulch during 1947. He mined on what promised to be a large body of high grade galena- and tetrahedrite-bearing ore, and had 35 tons of ore sacked and awaiting shipment early in 1948. Assays averaged about 400 ounces of silver to the ton, with the tetrahedrite carrying as much as 700 ounces of silver to the ton. The development of the property was hampered by the lack of a summer road.

The Runer brothers continued prospecting on their claims in the Charity Gulch area.

W. Williamson worked on a lay agreement on the Lucky Queen property. He mined 25 tons of high grade ore, which was shipped with ore from United Keno Hill Mines.

Assay Office

The assay office was maintained by the territorial government at Keno. There were 1,080 samples of rock received from all parts of the territory, and 1,596 assays or quantitative analyses were made. In addition qualitative analyses and chemical tests were made in connection with identification and classification of various rocks and minerals of which no record was kept. The assays made were gold and silver 1,080; lead 479; copper 13; zinc 20; molybdenum 2; antimony 1; and iron 1.

WHITEHORSE DISTRICT

Prospecting activity fell off towards the end of the 1947 season, apparently due to high costs of transportation and market uncertainties. Total activities throughout the year, however, showed considerable increase over the preceding period. More than a million dollars was spent in exploration and development of lode properties during the year. This was partly due to the increase in territory within the Whitehorse Mining District, caused by the revised boundaries which became effective July 1, 1947.

Hudson Bay Exploration and Development Co. Ltd., under field management of Tom Creighton, constructed a road from Pine Lake landing strip at Mile 722.3 of the Alaska Highway to their 125 claims in the Seagull Creek (Upper Swift River) area, and their 29 claims in the Crescent Lake area. They completed geological surveys and carried out considerable diamond drilling on the silver-lead properties.

Noranda Mines Ltd., under the direction of Dr. A.M. Bell and B. Brynelson, acquired a considerable number of mineral claims in the Whitehorse Copper Belt, where a well organized programme was carried out. A geophysical survey was completed and diamond drilling and general field work were done under the supervision of J.B. "Barney" Meahan. A central semi-permanent camp was established at McCrae.

Western Ranges Prospecting Syndicate, with Dr. D.R. Derry as supervising geologist, continued their prospecting operations along the Alaska Highway, particularly in the vicinity of Mile 702. Mr. F.G. Jones was in charge of the field party. Development work was planned for 1948.

Yukon Canyon Gold Ltd. was active nearby, and worked at developing a group of claims located near Mile 719 by C.W. Eden and L.J. Thompson.

Great Northern Exploration Co. Ltd., under the direction of Dr. F.W. Galbraith, placed two parties in the field. They carried out prospecting in the Wolf Lake area. Several claims were staked on two new discoveries north of the Alaska Highway and east of Wolf Lake.

Texakalta Exploration Company continued to explore areas adjacent to the Alaska Highway.

Aishihik Mining and Development Co. Ltd. was formed to develop a group of claims at the south end of Aishihik Lake. The property was staked by Major T.E. Noon and his associates.

North Star Prospecting Syndicate continued exploration work nearby, in the vicinity of Giltana Lake. A molybdenum occurrence located west of Aishihik Lake during 1947 was to be explored in more detail in 1948.

In the Victoria Creek area, Brown-McDade Mines Ltd. under the management of J.L. Hough, carried out considerable diamond drilling and tunneling. The work was supervised by Len G. White. Yukon Northwest Exploration Co. Ltd., under the supervision of Dr. Wm. V. Smitheringale, turned over several claims in the same area to Brown-McDade for development. Coleray-Yukon, and Nansen Yukon Mines Ltd. also carried out surface exploration on claims in the Victoria Creek area. Huestis Prospecting Syndicate carried out considerable surface work on their claims between Victoria and Nansen Creeks. Difficulties were encountered in diamond drilling operations being carried out by Conwest Exploration Co. in the Nansen Creek area, and the program was curtailed.

McAllister Syndicate was formed to explore and develop claims staked by Walter McAllister over a stibnite occurrence in the Wheaton River area. Other activity in the area included staking of the 12 R.H.S.M. claims on Mount Anderson.

During 1947, Yukon Coal Company Limited was incorporated and commenced operations by re-opening the Tantalus Butte Coal Mine at Carmacks, Y.T. The main object of the project was to supply Mayo, Dawson and Whitehorse with a reasonable quantity of fuel with which it was hoped to alleviate a shortage of cordwood and attendant high prices. Up to the end of March, 1948, the company had produced approximately 1,450 tons of coal, some of which had been used with success in Whitehorse.

PLACER MINING

The amount of placer gold recovered in the territory during 1947 on which royalty export tax was paid was 59,486.86 ounces, produced as follows: 54,850.31 ounces, Dawson District, 484.00 ounces, Mayo District, and 4,152.55 ounces, Whitehorse District. Approximately 64% of gold recovered was from the Dawson area operations of Yukon Consolidated Gold

Corporation, Limited.

There were 2,726 placer claims in good standing in 1947. Prospecting leases covering 179 miles were issued during the year, a sharp decrease of 267 miles from the previous year. The reason for this sharp decrease is the fact that during the war period, when the performance of representation work was dispensed with, many miles of prospecting leases were taken up. They were subsequently abandoned when provisions as to the performance of work were again made effective.

DAWSON DISTRICT

In the Dawson District 57 new claims, 36 restaked claims, and 2,448 renewals were issued during the year. Forty-one prospecting leases covering 113 miles were also issued.

The winter of 1946-1947 was probably the most severe within the history of the Yukon. It was a winter of extreme and tenacious cold spells with only intermittent and short relief. On February 2nd Snag Airport reported a temperature of -83 degrees Fahrenheit, which was believed to be the record low for the North American continent. The snowfall during the winter was about normal, but unusually brisk winds produced deep snow drifts along the roads. In the spring, the snow melted slowly and the water ran off without bringing the streams to high stages. The ice in the Yukon River moved out on the afternoon of May 9th, and the first boat arrived from Whitehorse on June 2nd. Rainfall during the summer was below normal. The months of June and July were particularly dry and many forest fires developed, the smoke being so dense that aeroplane service was temporarily interrupted. The fall was mild and excellent dredging conditions prevailed until early in December.

Yukon Consolidated Gold Corporation, Limited

Property

The company maintained in good standing all property which was deemed essential to the pursuance of its mining operations, including dredging hydraulic leases, placer mining claims, and water rights. During the year 118 placer claims having no promise of future gold productions were dropped, while control of 7 claims was acquired by option or lease. The total number of placer claims owned or controlled by the company as of December 31st, 1947 was 1,456. Adverse reports on examinations resulted in the cancellation of all options held on lode claims, and the relinquishment of all lode claims owned.

Power Generation and Transmission

The company's hydro-electric power plant, which was located on the North Fork of the Klondike River, operated continuously during the year and generated a total of 32,265,300 kilowatt-hours. Of this amount 68% or 21,891,900 kilowatt-hours were used by the company in its mining operations, and 18% or 5,934,500 kilowatt-hours were sold to the Dawson Electric Light and Power Company, Limited, for power and light in the City of Dawson. Power plant services required 4% or 1,404,800 kilowatt-hours, and transmission or line losses amounted to 3,134,100 kilowatt-hours or approximately 10% of the total output. The total cost of generation and transmission amounted to $126,676.31 or 0.455 cents per kilowatt-hour The power ditches, transmission lines and substations were maintained in good condition.

Hydraulic Stripping

Hydraulic stripping of muck overburden was carried on at six places, Upper, Middle and Lower Sulphur, Middle Dominion, Jensen and Hunker Creeks. The water supply was low until after mid-August but was plentiful from then to the end of the season. The full benefit of the increased water supply, could not be realized, however, as it came at a time when there was little solar thawing action. The total water delivered by the Sulphur-Australia Ditch was 89,203 miner's inch days, which was approximately 60% of ditch capacity. A summary of the stripping operations follows.

Area No.	Location	Operating Dates Started	Operating Dates Ended	Water Season Days	Water Used M.I.D.	Cu. Yds. Removed	Duty
6	Lower Sulphur	May 13	Sept. 21	132	26,732	503,899	18.9
8	Middle Sulphur	May 17	Sept. 20	127	62,461	637,638	10.2
9	Upper Sulphur	May 15	Sept. 27	136	19,191	521,054	27.2
10	Middle Dominion	May 9	Oct. 1	146	32,373	355,868	11.0
11	Middle Hunker	May 13	Oct. 3	144	29,177	163,041	5.6
12	Jensen	May 11	Sept. 21	134	7,917	109,215	13.8
				137	177,651	2,290,715	12.9

A total of $295,613.45 was expended for stripping, which gave a cost of 12.91 cents per cubic yard of muck removed.

Cold Water Thawing

Cold water thawing was conducted at six plants located at Bonanza, Lower Sulphur, Quartz, Middle Sulphur, Dominion and Hunker Creeks. A total of $340,268.99 was expended on these operations, with an average cost of 6.74 cents per cubic yard. The data on thawing operations are listed below.

Area No.	Location	Operating Dates Started	Operating Dates Ended	Thawing Season Days	Water Used M.I.D.	Cu. Yds. Thawed	Duty
4	Bonanza	May 31	Sept. 19	112	105,878	519,028	4.9
6	Lower Sulphur	May 6	Sept. 19	137	98,036	801,863	8.2
7	Quartz Creek	May 13	Sept. 19	130	74,129	768,293	10.4
8	Middle Sulphur	May 6	Sept. 19	137	124,664	1,190,017	9.6
10	Middle Dominion	May 10	Sept. 19	133	119,407	857,130	7.2
11	Middle Hunker	May 8	Sept. 19	135	124,571	911,677	7.3
				131	646,685	5,048,008	

Dredging

Six dredges operated during the season. The starting and closing down dates were normal. Dredge No. 4 on Bonanza Creek spent a large part of the season digging flotation through its own tailings. A large portion of the ground dug by Dredge No. 11 was previously dredged by the old Yukon Gold Company. A summary of the 1947 dredging operations is below.

Area No.	Location	Size Bucket Cu. Ft.	Operating Dates Started	Operating Dates Ended	No. Days Operation	Cu. Yds. Dredged
3	Klondike River	16	May 3	Nov. 18	199	1,828,878
4	Bonanza	16	April 29	Nov. 18	203	2,187,950
7	Quartz	5-3/4	April 20	Nov. 17	211	519,520
8	Middle Sulphur	7	April 29	Nov. 27	212	712,717
10	Middle Dominion	7	May 10	Nov. 17	191	740,594
11	Hunker	7	April 26	Nov. 17	204	702,869
						6,692,528

Production

The total production for the year from dredging operations was 37,789.38 fine ounces of gold, for which the company received a total of $1,326,906.80, representing an average value of 19.82 cents per cubic yard, or an average grade of 0.0056 fine ounces per cubic yard.

Construction

The spillway on the South Fork Ditch at Lee Creek was completely rebuilt and reinforced with rock fill. Rehabilitation of the Sulphur-Australia, and Burnham Ditches was carried on for most of the summer. An extensive dam for impounding water was constructed across the mouth of Jensen Creek.

Shops and Transportation

The machine shop, electrical repair shop, and automotive repair garage at Bear Creek were operated in the same manner as in previous years. Truck freighting was again done under contract with the McCormick Transportation Company.

Employment

Labour conditions continued to be unsatisfactory, and although there was some improvement in the quality over the previous year, it was still definitely poor. The inability of the men to work the full season was particularly troublesome. Approximately 100 university students were employed. The average number of men employed during the year, by months were as follows.

January	75	May	548	September	376
February	81	June	520	October	338
March	102	July	496	November	212
April	398	August	467	December	77

The peak employment was 567 men on May 23rd. The total man-shifts worked was 111,112. The total cash expenditure for wages and salaries was $1,145,991.36.

Prospect Drilling

Prospect drilling was carried on throughout the summer. The drilling was done on Gold Run Creek, where the work was directed to the establishment of pay streak extensions on either side of the old Yukon Gold Company dredge tailings. Drilling was also done on Dominion Creek below the mouth of Jensen, on Flat Creek opposite the mouth of All Gold Creek, on Caribou Creek, a tributary of Dominion, and on benches on Dominion Creek above No. 10 Camp. As a result of the investigations, reserves were substantially increased by the inclusion of Gold Run Creek as a potential dredging property. The results of the work done on Flat Creek and Caribou Creek indicated that they bore no promise of profitable mining possibility.

Miscellaneous Expenditures

Expenditures for equipment and supplies not purchased locally amounted to $291,911.77, on which freight charges of $69,821.78 were paid. Local purchases amounted to $502,316.71.

Yukon Explorations, Limited

Yukon Explorations, Limited held under lease 113 claims, and 62 miles of prospecting leases in the Sixtymile River area. On August 31, 1947, the company completed construction of a 3½ cubic-foot bucket-line dredge near the confluence of Big Gold and Glacier Creeks. The dredge was in continuous operation for the balance of the season.

Stripping and thawing operations were carried on in advance of the dredge with a crew of approximately 30 men. There were 400,000 cubic yards of material stripped, and 160,000 cubic yards of gravel were thawed. At the end of 1947, a gravel reserve sufficient for tens years' operations had been established. It was expected that this would be increased by exploration work in 1948.

The payroll of the company amounted to more than $79,000.00 in 1947.

Yukon Gold Placers, Limited

- Operations were carried on by this company at Henderson and Thistle Creeks during 1947. The Henderson Creek property consisted of 144 claims situated mainly on the Left Fork of the creek, owned by The Yukon Consolidated Gold Corporation, Limited, and operated by Yukon Gold Placers, Limited, under an agreement with the owners. The Henderson camp was re-opened on April 18th, and from then until October 11th a crew that reached a maximum number of forty-two men was employed on dredge construction, hydraulic stripping, mechanical stripping and thawing. Assembly of a 4½ cubic-foot, steel pontoon bucket-line dredge was completed on August 25th. The dredge was then operated until October 7th. During this time, it dug 36,000 cubic yards of material (21,000 cubic yards of gravel and 15,000 cubic yards of "muck") from which 275 fine ounces of gold were recovered.

Approximately 119,000 cubic yards of moss and "muck" were stripped from the surface of the dredging area by means of bulldozers, but the hydraulic stripping and thawing operations were considerably curtailed by shortage of water due to the unusually dry season. The volume of material moved by hydraulic stripping was 66,000 cubic yards. About 227,000 cubic yards of material were thawed by water points.

Several small buildings were constructed in the camp and about two miles more permanent road were built to improve the road connection to the Yukon River. The air strip was lengthened, and graded.

The Thistle Creek property of Yukon Gold Placers Ltd. consisted of 148 claims held by the company. The camp was re-opened on April 19th, and from then until October 12th a small crew was employed in mechanical and hydraulic stripping and in freighting mining supplies from the Yukon River to the camp. Peak employment was fourteen men. No mining was carried on at Thistle Creek during 1947.

As at Henderson Creek, the dry season was a considerable handicap to hydraulic stripping but 220,000 cubic yards of material were moved, while a further 166,000 cubic yards of moss and "muck" were stripped from the dredging area by bulldozers. The airfield was lengthened and straightened, and road maintenance was carried out. All the parts and supplies necessary to build a 4½ cubic-foot steel pontoon bucket-line dredge were freighted from the Yukon River to the proposed construction point about fifteen miles up Thistle Creek.

Clear Creek Placers, Limited

Clear Creek Placers, Limited held 115 claims, covering most of the Left Fork of Clear Creek and a small part of the Right Fork and of the main valley. After having been closed for the winter, the Clear Creek camp was re-opened on April 20th. The dredge commenced digging on May 29th, and was shut down 152 days later, on October 27th. The last members of the crew left camp on November 4th.

During the season the dredge advanced upstream over 5,700 feet, to a point about five and one-fourth miles above the mouth of the Left Fork. Approximately 318,000 cubic yards of material were dug and washed, and 2,491 ounces (fine) of gold were recovered.

In order that the gravel ahead of the dredge might thaw naturally, about 128,000 cubic yards of moss and "muck" were removed from above the gravel by using bulldozers to scrape the material into the creek or to divert the creek through it. No mechanical thawing was done.

The Clear Creek air-strip, which was close to Clear Creek Placers, Limited's camp was extended and straightened in 1947. All employees and some supplies were transported in and out of camp by air. There were 19 employees throughout the season at Clear Creek.

Other Placer Operations

An increased interest in summer placer mining operations on the older creeks was taken by individual miners, with satisfactory results, especially on Hunker, Last Chance, Gold Bottom, Eldorado and Gold Run Creeks, and also on creeks in the Sixtymile area. The quickened interest was attributed to results obtained by the use of modern machinery and equipment.

MAYO DISTRICT

In the Mayo District, 4 new placer claims, and 54 renewals were issued, making a total of 58 placer claims in good standing. There was also one prospecting lease covering one mile issued.

With the exception of the Taylor holdings on Dublin Gulch there was little placer activity during the year. E. Middlecoff on Highet Creek carried out representation work only. Bleiler on the same creek worked on a small scale, but as he shipped any gold produced through Dawson, his production was not shown in production from the Mayo District. Clifford Greig worked a lay on Dublin Gulch, and his operation plus Taylor's accounts for practically all of the gold reported.

WHITEHORSE DISTRICT

There were 54 new placer claims, and 73 renewals issued, making a total of 127 claims in good standing. Of the new claims, 43 resulted from the staking of a 4 mile lease into claims. There were also 25 prospecting leases covering 65 miles of ground issued during the year. New leases covered 36 miles, and lease renewals covered 29 miles. Numalake Mines Ltd., which held 40 miles of prospecting leases in the Kluane Lake area, dropped their leases in mid-summer without having tested them.

Prospecting activities decreased in the district toward the end of 1947. This condition was apparently caused by an increased demand for common labour in the district, and the increased cost of supplies and equipment. Development of existing claims was progressing, with the exception of those in the Victoria Creek area where the general activity had subsided.

Gold production during 1947 amounted to 4,215.55 ounces, including 63.5 ounces used locally on which no royalty was paid. A steady increase in production from 1944 to 1947 is indicated by the royalty records.

1944	-	150.88 ounces
1945	-	981.73 ounces
1946	-	2,229.55 ounces
1947	-	4,152.55 ounces

The greatest production activity was on Burwash Creek where 1,863.7 ounces of gold were recovered by Burwash Mining Co. Ltd., operating on company claims, and on claims owned by E. Mullett and the W.C. Walsh Estate. Next in order of importance was Shorty Creek, where Barker and Ray recovered 1,173.13 ounces from the McCauley and Vass claims. Also on Shorty Creek, Bates Creek Placers Ltd., recovered 902.12 ounces from the MacDougall Lease. The balance was recovered from Sheep Creek, Bates Creek, Discovery Pup Creek, Nansen Creek, Tatamagouche Creek, Cyr Creek, Pan Creek and the Selkirk, Haines Road and Hootalinqua areas.

CHAPTER 9.

MINERAL INDUSTRY OF YUKON, 1948

INTRODUCTION

Information on the mineral industry of Yukon in 1948 was compiled from reports by J.E. Gibben, Commissioner, G.A. McIntyre, Mayo Mining Recorder, and the Whitehorse Mining Recorder. Additional information was compiled from correspondence of C.E. McLeod of Yukon Consolidated Gold Corporation, S.S. Gilmour of Yukon Exploration Ltd., and J.K. Halley of Clear Creek Placers Ltd. and of Yukon Gold Placers Ltd., and from publications of the Emergency Gold Mining Assistance Act.

LODE MINING

There was an overall drop in the number of lode claims staked and renewed in the territory in 1948. In the Dawson District, where Yukon Consolidated Gold Corporation, Limited dropped all their lode claims, only 46 claims were staked or renewed. There was an increase in claim staking and renewals in the Mayo District, where 260 new claims were staked, and 507 claims were renewed. There were also 145 leases in good standing in the Mayo District. In the Whitehorse District, claim staking and renewals dropped sharply. There were 122 new claims staked, and 237 claims renewed. Two new coal leases were staked, one in the vicinity of Coal Mountain, and the other on Granite Creek, a tributary of the Duke River. One coal lease was renewed.

Mining and milling work at the Elsa and Keno Hill properties of United Keno Hill Mines, Limited continued to expand during 1948. High grade ore and concentrates containing silver, lead, and gold valued at more than $2,500,000.00 were produced. Several new companies were formed, and began development work on other properties in the Elsa and Keno Hill areas. Development work was also done on several properties in the Whitehorse Mining District.

There were 1,535 tons of coal mined by Yukon Coal Company, Limited at their Tantalus Mine near Carmacks.

DAWSON DISTRICT

Limited prospecting for base metals was carried out in the Dawson District during 1948. Joseph Sestak prospected between Matson Creek and Fifty-one Mile Creek off the Sixtymile River in a mineralized section, and was reported to have found base metal mineralization warranting further work.

Base metals were also found late in the season on the Sixtymile River below Miller Creek, and selected samples assayed 75.1% lead, and 21.8 ounces of silver per ton. The prospect was to be examined in more detail in 1949 by Ed Bourque.

Afe Brown and Jack Meloy held a property at the head of Casino Creek. The property was formerly optioned to Conwest, but reports indicated that Noranda had taken an option on it in 1948, and planned to do preliminary development work on it in 1949. Some trenching which had been done previously revealed gold, silver, lead, and zinc mineralization.

MAYO DISTRICT

Mining and mineral exploration activity in the Mayo District increased in 1948 to near pre-war figures.

United Keno Hill Mines, Limited

United Keno Hill Mines expanded their work force to 215 employees in 1948. During the year, 42,198 tons of ore were mined, from which 7,266 tons of high grade ore and concentrates were produced. The products contained 1,961,871 ounces of silver worth $1,466,498.57, and 5,203,179 pounds of lead worth $1,066,516.95. Gold worth $10,156.80 was recovered from the portion of the production which was shipped to the smelter, along with silver worth $1,256,696.99, and lead worth $799,879.48. Production was from the Hector-Calumet, and Elsa properties.

The Arctic-Mastiff group held by Mr. Bermingham and the Settlemier Estate was being explored under option by United Keno Hill Mines. An adit was being driven in an attempt to develop ore reserves. There was no production from the property in 1948, although C. Bleiler worked on the property during most of the winter. He found only milling grade ore.

Other Lode Operations

Mayo Mines Limited which held options on the Coral-Wigwam group and Alex Gordon's Sourdough Hill group closed down its Mayo area operations in 1948. All its equipment was sold, either to United Keno Hill Mines or East Bay Gold, and its one claim, the "Ram" on Sourdough Hill, was turned over to its parent company, Noranda Mines Limited.

Yukon Northwest Explorations Limited dropped its options on the Keno-August-Swiss group on Galena Hill, and the Besner-Milosevich group on Keno Hill in 1948, and was no longer active in the Mayo District.

Silver Basin Yukon Mines Limited held options on property in the Silver Basin area of Keno Hill, and owned outright the Silver Basin mineral claim. The company also owned properties on Galena Hill, the most important being the Tyee-Rocket group. The Silver Basin property was difficult of access in the winter and consequently little work was done there, but the company reported good results from a small amount of prospecting done during the fall. Messrs. Bjonnes and Fournier were working the Rocket-Tyee group under a lay agreement, and reported they were taking out a good grade of shipping ore. About 60 tons were sacked during the winter for shipment.

East Bay Gold Limited held a sub-lease from Hoyle Mining Co. (Yukon Lodes Ltd. being the original lessees) on the Jit-Rit-Bit-Pit group of claims on McKay Hill. Supplies were flown in during the summer, and mining operations began in the early fall. There were 150 tons of ore mined and sacked. As the ground proved shallow and the ore pinched out, it was not likely that East Bay would resume operations there. They did, however, lease Choketa Philipovich's Cream and Jean claims on Galena Hill, and began a small operation on that property.

Yukon Galena Hill Mines Limited, a new company in the Mayo District, held options on McLeod's Keno group, and on Sime's Rio group. The shaft on McLeod's ground was cleaned out and sunk to 100 feet. At 82 feet, a slash disclosed good grade ore. Some work was also done on Sime's property. The adit was cleared of ice, and forty tons of high-grade ore were sacked.

Sourdough Silver Lead Mines Limited was formed to mine the known ore body on the Lone Star and Fisher claims, although Reserve Mining Company, which owned the property stated that no lease was granted to Sourdough Silver. Work was begun in mid-summer, but little was accomplished. Miners who worked on the property reported, however, that there was good grade ore at the end of the drift. Between 10 and 20 tons of shipping ore were mined.

Yukeno Silver and Lead Mines Limited was another new company in the Mayo District. It held options on C.A. MacPherson's Silver King claim, and Thomas McKay's Highlander group on Keno Hill, and owned a group of eight claims in the Ladue area, but no work was done on any of the properties in 1948.

Mr. Charles Brefalt worked on Alex Nicol's Vanguard claim on Charity Gulch, Keno Hill. He put in 33 feet of shaft and drifted 100 feet, to extract some 36 tons of ore. Of this, 30 tons was shipped during 1948. Mr. Brefalt reported that he could not locate any more economic mineralization.

Assay Office

The assay office was maintained by the territorial government at Keno. There were 902 samples of rock received from all parts of the territory, although more than half came from Keno and Galena Hills and vicinity, and 1,525 assays or quantitative analyses were made. Numerous qualitative analyses and chemical tests made in connection with the identification of various rocks and minerals, of which no records were kept, were also done. The assays made were gold and silver, 902; lead, 502; copper, 68; zinc, 50; molybdenum, 2; and antimony, 1.

WHITEHORSE DISTRICT

Prospectors who left the district at the end of the previous season failed to return. Those who remained, as well as the larger companies who sent in their own prospectors, appeared to concentrate on the search for base metals during 1948. Interest in gold production was definitely lagging, apparently due to the high cost of production and the relatively low price of gold.

Amendments to the Yukon Quartz Mining Act were greeted with enthusiasm, particularly the Sections permitting the grouping of 16 claims at any time before filing assessment work and the crediting of excess work up to an amount sufficient to qualify for Certificates of Improvements. The introduction of metal tags was also favourably received.

The most active areas for prospecting and development work were in the vicinities of Whitehorse, along the Alaska Highway between Teslin and the Liard Rivers, and on the Hyland Plateau. Dismantling operations along the Canol Pipeline during the winter of 1947 attracted many people to the area, and considerable enthusiasm was being shown in prospecting along the route during 1948. Prospecting was also carried out in the vicinity of Bates River and Canadian Creek.

Western Ranges Prospecting Syndicate

Under the supervision of D.R. Derry, this company carried out development work on the Star, Sterling, and Molly properties along the Alaska Highway. On the Star group, which consisted of 10 claims situated three miles south of Mile 701, a shallow open cut was put in by gasoline rock drill on Claim No. 4 on the main showing. The cut was 120 feet long and from 3 to 12 feet deep. Three or four tons of high-grade galena was sorted from the material excavated and placed in a dump for shipment. Some additional prospecting was carried out on other claims of the group.

The Sterling group consisted of 9 claims located just north of the Highway at Mile 703.4. During 1948, a rock pit 3 to 6 feet deep was dug by a Warsop gasoline drill on No. 2 Claim on the main showing. This showed the vein to have a dip approximately parallel to the slope of the hill and to be covered over, except in the pit, by brecciated dolomite. The vein had a true width of about 2 feet and a channel sample across this width assayed 11.16 ounces silver per ton, 10.57% lead and 6.10% zinc. Additional work done on the No. 3 Claim, located some lenses and streaks of galena in a shear in dolomite.

An option was secured on the Molly Group of claims on the Yukon - British Columbia border, 5 miles south of the Highway at Mile 706. Eight of these claims located in Yukon were owned by Roy Ranson. Allan Holliday owned the B.C. claims. An open cut, 120 feet long and from 3 to 6 feet deep, was made by a Warsop rock drill. The main showing was on the B.C. side of the boundary. Between 4 and 5 tons of galena ore from it were sacked and shipped to the Trail smelter. Some showings of similar material were located on the Yukon side. All the veins were in granite.

In addition to the work on the properties, the syndicate carried out general propecting on both sides of the Highway in the vicinity of Mile 701 where a number of small showings of lead and other mineralization occurred. Some propecting was also carried out on the Canol Road in the vicinity of Mile 120 with little encouragement.

Noranda Mines Limited

Noranda Mines Limited, staked the 66 claim Whitehorse group, and the 22 claim Dugdale group in the Whitehorse Copper Belt during 1947. They also took an option on the Pueblo property, which consisted of several Crown granted claims, on which production had ceased in 1920. A general geophysical survey was commenced in 1947. During 1948, the survey continued, and a total of approximately 10,000 feet of diamond drilling was carried out on several indicated anomalies. A portion of the diamond drilling and exploration work was done on the Pueblo Mines property. Approximately 1,545 feet of the drilling were done in the vicinity of "Whitehorse No. 51" claim adjoining the "Big Chief" Crown granted property, 990 feet were drilled on "Whitehorse No. 30" adjoining the "Arctic Chief" property, and 1,425 feet were drilled on the Dugdale group in the vicinity of the Keewenaw occurrence. In addition, a considerable amount of trenching and detailed geological mapping were carried out on these areas. Operations were conducted from the company's central camp, established at MacRae.

The combined geophysical and geological surveys located the main ore bodies along the granite and limestone contacts, along the length of the belt. The diamond drilling results and assays were not made available.

Late in the fall, operations were suspended for the season at MacRae, and personnel were moved to the Hyland Plateau. Exploration work was commenced on a silver, lead and zinc showing covered by the "South Nahanni" group of claims, some of which were located by company personnel. The balance were optioned from K.E. McMillan.

Great Northern Exploration Company, Inc.

Field operations were continued for the second year by Great Northern Exploration Company, Inc., in the vicinity of Caribou Lake at the head of Meister (Moose) River. In addition to development work carried out on 4 claims previously staked, and known as the Moose group, an area of approximately 30 square miles was prospected. As a result, the Aurora group of 3 claims was staked, and the "Molly", "Bender", and "Bastille" claims were located separately in the general vicinity. The work on the Moose group exposed two small lead-zinc veins, and the prospecting located a scheelite zone and a silver-lead vein.

Hudson Bay Exploration and Development Company Limited

Hudson Bay Exploration and Development Company Limited was not active in the Whitehorse District in 1948, although in previous years work totalling more than $135,000.00 was done in the District. The company held three properties, the "K.P." group of 45 claims in the Logjam Creek area, and the "Atom" group of 29 claims and the "Swift" group of 67 claims in the vicinity of the headwaters of the Swift River. Work which had been done included diamond drilling to trace silver-lead veins. Most of the claims were dropped because of the manner in which grouping provisions could be applied under the Mining Act when applying for assessment work credit. The company shifted its activities to British Columbia, south of Swift River.

Yukon Coal Company Limited

This company took over the operation of the Tantalus Butte deposits on the right limit of the Lewes River, as well as the adjoining property of the Five Fingers Coal Company at Carmacks. Operations were confined to opening up and developing the seams at Tantalus Butte. A decline was driven at an angle of 30 degrees down the seam, which pitched 50 degrees to the west. The decline, which was protected by a series of pillars, was driven 500 feet, or to a vertical depth of 250 feet. Towards the end of 1948, work was discontinued on the decline and concentrated on driving the upper level through the old workings. The level was driven through several cave-ins from former operations, and was retimbered. Operations were suspended for the winter on reaching a point 400 feet north of the slope. The development work showed the seam to be remarkably uniform in thickness, averaging from 9 to 11 feet. A series of channel samples also showed remarkable uniformity, with a B.T.U. value of 12,000, ash content of 10% to 12%, and 3% to 5% moisture.

Coal shipped from the mine in 1948 totalled 1,535 tons, of which 451 went to Dawson, 955 to Mayo, 125 to Whitehorse, and 4 tons elsewhere. Consumers generally found the coal to be of good quality, and its availability eased the shortage of wood fuel particularly in Dawson and Mayo.

Yukon Canyon Gold Limited

Yukon Canyon Gold Limited started operations on their property in the vicinity of Mile 719, Alaska Highway, under the supervision of the President and Manager, Mr. A.C. Eden. Results of the work were not reported.

PLACER MINING

The amount of placer gold recovered in the territory during 1948 on which royalty export tax was paid was 76,132.48 ounces produced as follows: 71,443.13 ounces, Dawson District, 598.75 ounces, Mayo District, and 4,090.60 ounces, Whitehorse District. Approximately 63% of the gold recovered was from the Dawson area operations of Yukon Consolidated Gold Corporation, Limited.

There were 2,661 placer claims in good standing in 1948. Prospecting leases covering 171 miles were issued during the year, a further although slight decrease from previous years.

DAWSON DISTRICT

In the Dawson District, 2,446 new, and restaked claims, and renewals were issued during the year. Prospecting leases covering 84 miles were also issued.

The winter of 1947-48 was one of the mildest in several years, with the temperatures well above zero until about the middle of December. From then until the first of February the weather was unsettled, with temperatures ranging from 27 degrees Fahrenheit above zero to 32 degrees Fahrenheit below. Following this period, the coldest weather of the winter occurred, the cold spell lasting well into March. Snowfall was about normal. Little drifting occurred, as there were few winds of high velocity. There was no rush of water in the spring, as the thaw was delayed by relatively cold weather in April. The ice in the Yukon River moved out on May 12th, and the first boat arrived from Whitehorse on June 2nd. Rainfall during the summer was below normal, with July being particularly dry. The fall temperatures were about normal until the middle of November, when they fell rapidly, reaching 55 degrees Fahrenheit below zero on November 27th. They remained well below zero the rest of the year. Preceding the cold spell, a heavy snowfall occurred which protected the ground from extreme frost penetration.

Yukon Consolidated Gold Corporation, Limited

Property

The company maintained in good standing all property deemed necessary to the pursuance of its mining operations, including dredging leases, hydraulic leases, placer mining claims, and water rights. Control of two placer claims was acquired through lease. The mining ground owned or controlled by the Company as of December 31st, 1948 consisted of 1,458 placer mining claims, Anderson Lease No. 1, Bronson and Ray Lease No. 5, and Boyle Lease No. 18.

Power Generation and Transmission

The company's hydro-electric power plant, which was located on the North Fork of the Klondike River, operated continuously during 1948, and generated a total of 34,648,400 kilowatt-hours of power. Of this amount 23,668,900 kilowatt-hours, or 68%, were used by the company in its mining operations, and 6,480,300, or 19%, were sold to The Dawson Electric Light and Power Company, Limited, for supplying light and power to the City of Dawson. Power Plant services required 1,449,400 kilowatt-hours, or 4% of the total, and transmission line losses amounted to 3,044,800 kilowatt-hours, or 9% of the total generated. The total cost of generation and transmission amounted to $135,073.56 or .448 cents per kilowatt-hour sold and distributed. The power ditches, transmission lines and substations were kept in good condition. The widening of the South Fork Ditch was continued and the banks of both it and the North Fork Ditch were improved.

Hydraulic Stripping

The removal of muck overburden by hydraulic stripping was carried on in six areas, Upper, Middle and Lower Sulphur, Middle Dominion, Jensen and Hunker Creeks. The water supply was extremely low during the latter part of June and July, but rose to approximately normal from early August to the end of the season. The total water delivered by the Sulphur-Australia Ditch was 132,615 miner's inch days, which was about 89% of ditch capacity. A summary of the stripping operations follows.

Area No.	Location	Operating Dates		Water Season Days	Water Used M.I.D.	Cu. Yds. Removed	Duty
		Started	Ended				
6	Lower Sulphur	May 15	Aug. 13	87	23,603	510,696	21.6
8	Middle Sulphur	May 14	Sept. 27	137	62,365	904,067	14.5
9	Upper Sulphur	May 15	Sept. 25	134	21,499	735,949	34.2
10	Middle Dominion	May 12	Sept. 25	136	32,815	393,537	12.0
11	Hunker	May 14	Sept. 30	135	35,105	464,722	13.2
12	Jensen	May 15	July 15	49	8,991	135,049	15.0
				113	184,378	3,144,020	17.0

A total of $261,167.02 was expended on the above operations, which gave a cost of 8.31 cents per cubic yard of muck removed. Stripped reserves at the end of 1948 totalled 14,152,371 cubic yards.

Cold Water Thawing

Cold water thawing was conducted at seven plants located at Bonanza, Quartz, Hunker, Middle Dominion, Lower, Middle and Upper Sulphur Creeks. A total of $324,632.71 was expended on these operations, with an average cost of 7.35 cents per cubic yard thawed. The data on the thawing operations are listed below.

Area No.	Location	Operating Dates Started	Operating Dates Ended	Thawing Season Days	Water Used M.I.D.	Cu. Yds Thawed	Duty
4	Bonanza	May 14	Sept. 26	136	91,350	527,496	5.8
6	Lower Sulphur	May 16	Sept. 16	124	97,927	587,764	6.0
7	Quartz	May 15	Sept. 16	125	84,649	516,642	6.1
8	Middle Sulphur	May 10	Sept. 17	131	125,090	865,983	6.9
9	Upper Sulphur	May 12	Sept. 18	130	64,593	399,073	6.2
10	Middle Dominion	May 10	Sept. 18	132	119,142	947,122	7.9
11	Hunker	May 10	Sept. 15	129	103,029	571,625	5.6
				130	685,780	4,415,705	6.4

Thawed reserves at the end of 1948 totalled 7,669,656 cubic yards.

Dredging

Seven dredges were in operation during the season, which extended from May 1st to November 21st. They were about a week late in starting, due to adverse weather conditions in the spring. The closing dates were about normal. Dredge No. 6 began operation after being shut down since the fall of 1942. The progress of Dredge No. 4 was impeded considerably during the early part of the season when digging through an area covered by tailings and slimes from the hydraulic operations of the old Yukon Gold Company. Dredge No. 8 was also retarded because of the excessive amount of sand contained in the gravel. The yardage dug by Dredge No. 10 was reduced considerably by exceptionally hard bedrock. Generally the digging conditions encountered by the various dredges were about the same as in previous years. A summary of the 1948 dredging operations is below. Dredging costs were 18.97 cents per cubic yard.

Dredge No.	Location	Bucket Size Cu. Ft.	Operating Dates Started	Operating Dates Ended	No. Days Operations	Cu. Yds. Dredged
3	Klondike River	16	May 5	Nov. 14	193	1,875,701
4	Bonanza	16	May 6	Nov. 21	199	1,737,142
6	Lower Sulphur	7	May 5	Nov. 19	198	878,125
7	Quartz	5-3/4	May 6	Nov. 7	185	531,180
8	Middle Sulphur	7	May 3	Nov. 14	195	726,337
10	Middle Dominion	7	May 2	Nov. 14	196	610,988
11	Hunker	7	May 1	Nov. 19	202	787,193
						7,146,666

The No. 5 area on Dominion Creek lying below the mouth of Sulphur Creek had not been mined since the destruction of that dredge by fire in July, 1943. It was decided to change the course of Dredge No. 6 working on Lower Sulphur, and send it down the creek on the right limit to enable it to enter the No. 5 area. A portion of No. 6's reserves was added to those of No. 8 and the remainder was added to the No. 5 reserves. The old No. 5 area with the additional yardage from No. 6 was given the designation of No. 6. This plan avoided the building of a new dredge to replace No. 5 (which under prevailing conditions would have cost in excess of $600,000), guaranteed a long life for Dredge Nos. 6 and 8, and made available the substantial amounts of thawed and stripped ground which had been prepared for No. 5.

Dragline Mining

A mining operation, using a Marion Electric Shovel which was converted to a dragline during the summer, and a mobile washing plant, was started on Dominion Creek at the mouth of Jensen Creek. It began operation on June 20th and ended on August 30th when it was closed down due to mechanical failure and unsatisfactory recovery. During its operating period of 71 days, 53,351 cubic yards of gravel were handled, for an average of 751 cubic yards per day.

Production

The total production for the year from dredging and dragline operations was 47,649.064 fine ounces of gold and 10,022.09 ounces of silver, for which the company received a total of $1,675,750.95, representing an average value of 23.3 cents per cubic yard mined and an average grade of 0.0067 fine ounces of gold per cubic yard.

Shops and Transportation

The machine shop, electrical repair shop and automotive repair garage, located at Bear Creek, were operated in the same manner as in past years. Truck freighting was done again under contract with the McCormick Transportation Company.

Employment

As in preceding years, arrangements were made with the National Employment Service to supply labourers. Men were plentiful at the beginning of the season, but the quality continued to be unsatisfactory. Although there was some improvement over the previous year, the inability of the men to stay on the job for the full season handicapped operations, particularly during the latter part of the season. The average number of men employed during the year, by months, was as follows.

January	86	July	503
February	90	August	457
March	121	September	415
April	414	October	338
May	559	November	189
June	546	December	80

The peak employment was 576, which occurred on June 5th. The man-shifts worked were 107,258 and the total cash expenditure for wages and salaries was $1,145,787.11.

Prospect Drilling

Prospect drilling was carried on during the spring on the Dominion Creek Benches above No. 10 camp, and on Dominion Creek below Jensen Creek. As a result of this work, a considerable addition was made to the Dominion Creek dredging reserves. Proven gravel reserves at 31st December, 1948, were 121,365,472 cubic yards with an average value 35.3 cents, with gold at $35.00. These reserves included 3,500,000 cubic yards with an average value of 10.4 cents to be worked by Dredge No. 3, but did not include 30,942,863 yards of partly proven ground, to be worked by Dredge No. 4.

Miscellaneous Expenditures

Expenditures for equipment and supplies not purchased locally amounted to $310,519.81, on which freight charges of $74,167.11 were paid. Local purchases amounted to $426,747.51.

Yukon Exploration Limited

Operations for 1948 were commenced on April 23rd, when the first of the crew arrived at the property near the confluence of Big Gold and Glacier Creeks. Overhauling and reconditioning of the machinery for the season's run was started. Stripping operations were begun on May 14th. Shortage of parts for tractors crippled their operation, and somewhat hampered all activities as much work was dependant upon their use.

An airport was started and a camp site cleared. All available tractors were put on this work toward the season's end in order to finish it suitably for winter use in 1948. The final grading work was finished in part but heavy rains made completion impossible. It was expected some winter use would be made of the airfield when sufficient snow had fallen.

Mechanical and Hydraulic Stripping

The poor mechanical condition of the tractors prevented tractor clearing for the major part of the season. Much hydraulic stripping was accomplished, however, during the high water period in the spring and a total of 31,560 cubic yards of moss, muck, roots and brush were removed making available an area of 450,000 sq. ft. for further hydraulic stripping.

A method of stream stripping suggested by Mr. E.N. Patty, was tried out with very satisfactory results. This method consisted of deflecting all stream water possible against the muck banks by building small deflection dams of gravel in the stream. Some 30,000 cubic yards of muck were removed by this method which was very economical as no pumping, and little attention were required. At the end of the season, 257,388 cubic yards of muck had been removed from a 392,200 square foot area.

Cold Water Thawing

The thawing plant was laid in place in advance of the mild weather which was a week or two later than normal in 1948. Point driving proved to be very difficult and costly due to the presence of three strata of coarse boulders in the gravel. The third stratum, about two feet thick, and about two feet above bedrock was particularly difficult to penetrate and many points had to be pulled and replaced in order to thaw the bedrock. Once a point was driven, however, the surrounding ground thawed without difficulty when given sufficient time. In dredging the ground thawed during 1948, some frost was encountered on the right limit where trouble was had in driving the points. A little frost was also encountered in the last area thawed. Thawing there was rushed as much as possible in order to cut down on crew.

Bar probing to test the possibilities of natural thawing was carried out under the supervision of Mr. E.N. Patty. Areas freshly stripped, two years stripped, and three years stripped, were tested and the results recorded. In one instance three year exposed ground was found to have thawed to bedrock at 16 feet. Generally it was found that the thaw had penetrated to a depth of from three to four feet per year. No information was available as to the practibility of natural thaw to the 15 feet to 20 foot depth found in the upstream section of the property.

As gold production was poor, and thawing a large expense, it was necessary to curtail the thawing program and lay off the crew prematurely on August 23rd. The stripping program was curtailed at the same time.

At the end of the season, 145,000 cubic yards of gravel and rock with at 20.5 foot average depth over an area of 191,200 square feet had been thawed. The average temperature of the water used was 44.5 degrees Fahrenheit.

Dredging

Dredge construction was completed in 1948, and adjustments and minor fitting were done. The dredge began mining on June 21st and operated until July 2nd on which date it was necessary to shut down to await the thawing of more ground. Thawed ground was again available on July 18th and dredging continued until the end of the season. During the first part of the season it was found impractical to push the capacity beyond 80 yards per hour due to power shortage and the tenacious character of the bedrock clay. Both these conditions improved toward the end of the season and the yardage per hour was increased to 100.

Gold recovery was considerably below the estimated value of the ground. This was thoroughly investigated by all the staff and consulting engineers. Much testing was carried out on both the sluice reject and the stacker belt reject to determine if gold losses at these outlets were abnormal. The results of these tests showed that there were small normal losses at these outlets and that the gold saving devices were functioning normally.

The dredge operated 88.6% of the possible running time, and averaged 90 cubic yards per hour over the season. Total yardage mined was 152,432 cubic yards from an area of 187,116 bedrock square feet. The average dredging depth was 22.0 feet.

Production

Total production from the dredge for the season was 1,708.37 raw ounces of gold, which contained 1,390.72 fine ounces of gold, and 215.49 fine ounces of silver. The value of the production was $48,782.72. Gold from the last clean-up was 790 fine. Gold from the other six clean-ups ranged between 817 and 825 fine. The tenor of the gravels mined ranged from 15.1 to 55.5 cents per cubic yard through the seven clean-ups, and averaged 32.0 cents per cubic yard.

At the conclusion of the season the dredge was placed over a shallow bench for safety and all equipment was winterized. Other camp equipment was stored and winterized also. Stores were inventoried and a watchman left in charge.

Clear Creek Placers, Limited

Clear Creek Placers, Ltd. held 115 placer mining claims, covering most of the Left Fork of Clear Creek and a small part of the Right Fork and of the main valley.

After having been closed down for the winter, Clear Creek camp was reopened on April 16th. The dredge commenced digging on June 2nd, and was shut down 158 days later, on November 6th. The last members of the crew left camp on November 15th. This was the longest season of continued operation at Clear Creek. Twenty men were employed throughout the season.

No mechanical thawing was done. In order that the gravel ahead of the dredge might thaw naturally, about 115,000 cubic yards of moss and muck were removed from above the gravel by using bulldozers to scrape the material into the creek or to divert the creek through it.

During 1948, the dredge advanced upstream 5,600 feet. Approximately 317,000 cubic yards of material were dug and washed, from which close to 2,489.05 fine ounces of gold were recovered. The average grade of the material dug and washed was 27.5 cents per cubic yard, with gold at $35.00 per ounce.

Yukon Gold Placers, Limited

Yukon Gold Placers, Limited continued their ground preparation operations on Henderson and Thistle Creeks during 1948. The Henderson Creek property consisted of 144 claims situated mainly on the left fork of the creek. The claims were owned by the Yukon Consolidated Gold Corporation Ltd., and operated by Yukon Gold Placers Ltd. under agreement with the owners.

Henderson Camp was reopened after the winter on April 21st, and was closed at the end of the season on October 16th. A crew of 13 or 14 men was employed during this time. The Henderson dredge was not operated during the 1948 season, but ground preparation work was done. Approximately 73,000 cubic yards of moss and "muck" were stripped from the surface of the dredging area by means of bulldozers and a further 145,000 cubic yards were removed hydraulically. No mechanical thawing was done.

The Thistle Creek property of Yukon Gold Placers, Ltd. consisted of 148 claims held by the company. Thistle Camp was reopened after the winter shut-down on April 23rd, and was closed at the end of the season on October 23rd. Through the whole season, a crew of 13 men was employed on mechanical and hydraulic stripping, and for the last six weeks of the season the crew was increased to 17 while the new 4½ cubic-foot bucket-line dredge was being assembled. This job was only about one third completed when the weather got too cold for work to be continued.

Approximately 96,000 cubic yards of moss and "muck" were stripped from the surface of the dredging area by means of bulldozers, and an additional 243,000 cubic yards were removed by hydraulic methods. The usual maintenance work was done on the camp, roads and airport.

Other Placer Operations

Reno Gold Mines, Limited operated at Canadian Creek, and recovered tungsten in ferberite, and gold. Their production figures were not known. A road was built from Britannia Landing on the Yukon River to the property.

Ymir Yankee Girl Gold Mines, under the direction of Mr. C.D.N. Taylor, did stripping with one bulldozer, employing two men, on Ballarat Creek. A portable trommel plant and drag-line were set up but production figures were not obtained. The company also had a nine mile lease on Black Hills Creek which was drilled, and was considered a possible site of future dredging operations.

Gil Hart did prospecting work on a five mile lease on Moose Creek during 1948, and planned further work for 1949. Miller Creek Placers operated in the Sixtymile River area with one bulldozer, and a sluice box. They recovered 1,564.83 fine ounces of gold. Cole Brothers did stripping on Gold Run Creek, and did some bulldozing on Paradise Hill. They also recovered 347.54 fine ounces of gold from Hunker Creek. Bert Bratsberg worked on Gold Bottom Creek with a sluice box and a bulldozer. He recovered 561.23 fine ounces of gold. John King prospected Little Blanche Creek, and planned further work in 1949.

MAYO DISTRICT

In the Mayo District, 3 new placer claims and 92 renewals were issued, making a total of 95 placer claims in good standing. Placer leases covering 16 miles were also issued.

Mr. Fred Taylor worked his placer claims on Dublin Gulch using a small crew, a bulldozer, highlift shovel and dump truck. He recovered 500.82 fine ounces of gold.

Mr. C. Bleiler worked his own ground on Highet Creek and performed the essential representation work on the Middlecoff ground on the same creek. He made his shipments through the Bank of Montreal in Dawson, so his production was not included in Mayo District figures.

WHITEHORSE DISTRICT

There were 28 new placer claims and 92 renewals issued during the year, making a total of 120 placer claims in good standing. There were also 20 new prospecting leases covering 59 miles issued, and 7 leases covering 12 miles were renewed. Prospecting activities continued at about the same level as in 1947.

Gold production for the period amounted to 4,144.6 ounces including 54 ounces used locally, on which no royalty was paid. This production was slightly less than the 1947 production. Gold production on which royalty was paid, by location, was as follows.

Bullion Creek	922.25 ounces
Burwash Creek	2,620.15 ounces
Liard River	2.10 ounces
Lewes River	5.60 ounces
Nansen Creek	54.05 ounces
Selwyn Creek	114.25 ounces
Shorty Creek	316.00 ounces
Sheep Creek	17.35 ounces
Teslin River	4.20 ounces
Miscellaneous	34.65 ounces
	4,090.60 ounces

Kluane Dredging Company operated on the Proctor property, a group of 21 claims on the lower section of Burwash Creek. Their equipment consisted of a dragline and washing plant, operated by a total staff of 8 men in 3 shifts. In addition, 5 men did prospecting and testing work. Their total gold production for the period was 1,546.66 fine ounces of gold.

Burwash Mining Company, with H. Besner, president, operated on 7 claims and a three-mile prospecting lease, all on the upper section of Burwash Creek. Equipment consisted of a Lorain Diesel 3/4 yard shovel, one D-8 Caterpillar bulldozer and a sluice-box. Water was diverted from the creek, by means of a 22 inch pipe. The operation entailed the removal of overburden and disposal of tailings with the bulldozer, while the shovel moved dirt from bedrock directly into the sluice-box. The sluice-box was moved periodically. Five men and a cook comprised the total personnel on this operation, which operated from June 15th to October 1st. Gold recovery for the period was 644.29 fine ounces of gold.

Bates Creek Placers Company operated on Karl Strandberg's claims and a five-mile prospecting lease on Bullion Creek. Equipment used consisted of a 3/4 yard shovel, a D-7 Caterpillar bulldozer and a sluice-box. Recovery for 1948 amounted to 745.52 fine ounces of gold.

Ed. Barker and Irvin Ray carried out considerable bulldozer trenching, and sampling on their three-mile lease on Alder Creek. In addition, bulldozing and sluice-box work was carried out in the upper half of Discovery Claim on Shorty Creek, held by Major Thola E. Noon. Their gold recovery on Shorty Creek was 262.27 fine ounces of gold.

T. Comeau continued road building to gain access to his two prospecting leases on Comeau and Willie Creeks in the Kusawa Lake area. Mr. and Mrs. F. Dupont recovered approximately 115 ounces of gold from hand operations on two claims on Little Gold Creek near Selkirk. Karl Strandberg recovered 17.35 ounces through prospecting on Sheep Creek. Karl Paulsen recovered 54 ounces from his five claims on the East Fork of Nansen Creek. Preparations for mining were made on Teslin River, Goat Creek, and Livingstone Creek.

CHAPTER 10.

MINERAL INDUSTRY OF YUKON, 1949

INTRODUCTION

Reports by J.E. Gibben, Commissioner, G.A. McIntyre, Mayo Mining Recorder, and W.M. Emery, Whitehorse Mining Recorder were used in compiling information on the mineral industry in Yukon during 1949. Additional information was obtained from correspondence of Mrs. Sealey of Yukon Consolidated Gold Corporation, M.D. Cole of Cole Brothers Placers, J.G. Temple of Miller Creek Placers, C.F. Herbert of Yukon Placer Mining Company, J.K. Halley of Clear Creek Placers Limited and of Yukon Gold Placers Limited, and J.R. King, and from publications of the Emergency Gold Mining Assistance Act.

The road from Mayo to Minto was completed in 1949 and winter traffic between the communities became common. It proved of benefit to mining companies in the Mayo District, and was expected to promote new developments in the areas opened up by the road. Work was also being done to improve the winter road between Minto and Whitehorse, and make it suitable for year-round traffic. The road from the Alaska Highway to Boundary in Alaska was also nearing completion, as was the summer road from Dawson to Boundary.

LODE MINING

Lode exploration decreased in 1949 over the level of 1948. There was little activity in the Dawson District during the year. Only limited exploration and development was done in the Mayo District by companies other than United Keno Hill Mines, Limited. Even that company was forced to curtail its development work, and concentrate on rebuilding its mill which was destroyed by fire on June 11. There was considerably less activity in the Whitehorse District in 1949 than in the previous year.

In the Dawson District, there were only 22 new claims staked, and 37 claims renewed, making 59 lode claims in good standing. There were 361 new claims staked in the Mayo District, and 618 claims were renewed. There were also 136 leases in good standing in the Mayo District. In the Whitehorse District, 61 new claims were staked, and 267 claims were renewed.

Mineral production during the year was 7,533 tons of concentrate containing an estimated 5,699,500 pounds of lead, 1,603,250 ounces of silver, and 2,818,750 pounds of zinc, plus approximately 60 tons of high grade silver-lead ore.

There were 3,158 tons of coal mined in 1949 by Yukon Coal Company, Limited at their Tantalus Mine near Carmacks.

DAWSON DISTRICT

Limited base metals exploration was carried on in the Little Twelvemile River, Cassiar Creek, and Sixtymile River areas during 1949.

MAYO DISTRICT

Very little prospecting was done during the year, although development work continued at a number of properties, and mining was done on United Keno Hill Mines, Limited's Hector property.

United Keno Hill Mines, Limited

The company's plans for the 1949 season were to continue work on Galena Hill with production at the Hector, and development at the Elsa, Silver King, No Cash, Calumet and Bermingham properties. No increase in mill tonnage was contemplated, due to difficulties of transportation and power. Plans were made to commence operations on Keno Hill, starting on the newly opened #6 vein. An exploratory program on the Ladue, Sadie, Lucky Queen, Porcupine, and King properties, and claims on #9 vein was also planned with a view to confirming previous work, and resuming production there when power and transportation were available. The company had also acquired options on the Coral-Wigwam group and the Sourdough Hill group which were previously under option to Mayo Mines Limited. Underground diamond drilling done at various properties totalled 1,415 feet.

Tonnage mined during the calendar year was 25,382 dry tons, from which 6,576.61 tons of concentrates were produced. The concentrate contained 212.84 ounces per ton silver, 37.83% lead, and 18.71% zinc. The total tonnage shipped during the year was 6,551.65 tons, and the gross smelter return was $1,799,955.75. Production was almost entirely from the Hector claim. Development work done on the Calumet, Elsa and No Cash properties yielded minor amounts of ore.

United Keno Hill Mines Limited's mill was destroyed by fire on June 11th. Development work which had been going on at the Elsa, Silver King, No Cash, Calumet and Bermingham properties was closed down. Projected development work which was about to begin on Ladue, Sadie, Lucky Queen, Porcupine, and King properties, and claims on #9 vein was cancelled. All efforts were concentrated on rebuilding the mill. The new mill was quickly constructed, and production resumed on October 24th. It had a capacity of 250 tons per day, with provision for differential float of lead and zinc.

Capital expenditures during the year, apart from replacement of fire losses, included installation of a new 500 H.P. diesel engine, extension of machine shop facilities, construction of a new sixty-man bunkhouse at Calumet-Hector camp, and provision of numerous smaller buildings and pieces of equipment. An average of 178 men was employed monthly, a reduction from about 205 prior to the mill fire.

Other Lode Operations

Silver Basin Yukon Mines, Limited, Yukon Galena Hill Mines, Limited, and Yukeno Silver and Lead Mines, Limited transferred all interests to Consolidated Yukeno Mines, Limited. Although they held extensive properties on Galena, Keno and Sourdough Hills, including 114 claims, and options on A. McLeod's "Keno" group, the "Chief" group, and "Rio" group on Galena Hill, the Fisher Estate claims in Silver Basin and McKay's "Highlander" group on Keno Hill, very little development work was done during the year. The only ore produced was that mined by Messrs. Bjonnes and Fournier, who had a lay on the Rocket-Tyee Group, and took out sixty tons. The company opened up A. McLeod's "Keno" property, and a twenty-nine foot vein was cross-cut. Apparently, no work was done to determine the vein's extent or value. The company's work on Sime's Rio group was negative.

East Bay Mining Company (East Bay Gold Limited) attempted a small operation on Philipovich's "Cream-Jean" group of claims, but abandoned it after about six week's work.

Messrs. Besner, Milosevich, Brefalt, Nichol, and Hawthorne prospected, but with no outstanding results, and no production. Messrs. A.J. Dickson and I. Flegel discovered and staked some non-commercial uranium showings in the Crooked Creek area, namely, the "A and J." groups.

Assay Office

The assay office was maintained at Keno by the territorial government. There were 1,393 samples of rock received from all parts of the territory, although more than 75% came from Keno and Galena Hills and vicinity, and 1,695 assays or quantitative analyses were made. The analyses made were gold and silver, 1,393; lead, 226; zinc, 61; copper, 9; antimony, 5; and molybdenum 1.

WHITEHORSE DISTRICT

Mining and mineral exploration activity in the Whitehorse District during 1949 was considerably below that of 1948. The larger companies spread their activities to other fields and the exodus experienced in 1948 with regard to the individual prospectors continued.

Brown McDade Mines Limited at Victoria Creek was inactive.

The Hudson Bay Exploration and Development Company operated several parties of prospectors out of Teslin. Some worked in northern British Columbia, but several parties operated in the area between the Alaska Highway and the Canol Road. No claims were staked as result of their activities.

Noranda Mines Limited continued to explore their silver-lead-zinc discovery at the headwaters of the Coal River, where several thousand feet of diamond drilling were completed. Their investigations in the Whitehorse Copper Belt were not resumed.

The Yukon Ranges Exploration Limited (formerly the Western Ranges Prospecting Syndicate), spent little time on their ground between Mile 701 and Mile 706 on the Alaska Highway, and moved into northern British Columbia for more extensive prospecting.

The discovery of high-grade manganese ore was made at mile 1212 on the Alaska Highway and ground along the highway in the vicinity of the Alaska boundary was staked. Investigation of the property led to the preliminary interpretation that the vein was cut off by a granitic intrusion.

Many samples were submitted to the Mining Recorder's Office for testing with a Geiger Counter, but all those recovered from the Whitehorse District proved negative.

The Yukon Coal Company Limited mined 3,158 tons from their Tantalus Butte Mine, of which 2,553 tons were sold for consumption at Dawson, Mayo and Whitehorse. The mine closed for the winter at the end of October.

PLACER MINING

The amount of placer gold recovered in the Territory during 1949 on which royalty export tax was paid was 104,857.87 ounces produced as follows: 102,369.62 ounces, Dawson District, and 2,488.25 ounces, Whitehorse District. No gold shipments were made through the Mayo Office during the year. Approximately 56% of the gold recovered was from the Dawson area operations of Yukon Consolidated Gold Corporation, Limited.

There were 2,067 placer claims in good standing in 1949. Prospecting leases covering 181.5 miles were also issued during the year.

Financial considerations affected placer mining during the year. The Canadian dollar was placed at par with the American dollar, reducing the effective price paid to Canadian gold producers. The benefits of the Emergency Gold Mining Assistance Act, instituted in 1948, but with no payments made until 1949, did not appear to be appreciated until reaction to the revaluation of the dollar had already set in. Some of the smaller scale placer operations were not eligible for benefits under the Emergency Gold Mining Assistance Act, in any case. The dollar was devalued by 10% on September 1st, again providing a premium for Canadian gold producers.

Larger mining ventures were also feeling the effects of inflation coupled with a stable gold price. In its annual report for the year, Yukon Consolidated Gold Corporation noted "Although the year 1949 may be considered a successful one for the Company, the gradual but insistant and immutable rise in costs makes it clearly evident that no further increases in the price of supplies or in wages can be sustained without making the Company's operation uneconomic".

DAWSON DISTRICT

In the Dawson District, 1861 new and restaked claims and renewals were issued during the year. Prospecting leases covering 93 miles were also issued during the year.

The year 1949 began ominously, as a cold spell which started on November 15th of the previous year, persisted until February 25th. Following this there was a period of unusually warm weather that lasted throughout March and to the middle of April, when it changed abruptly. During the latter part of April, May and June, the temperatures were below normal, with almost continuously overcast skies. A change occurred on July 9th, when the temperature rose to 87.7 degrees Fahrenheit, which was the warmest day of the year. Good weather continued throughout the rest of the summer and late into the fall, with the fall being the mildest on record for the Dawson area. On December 18th the temperature dropped to -37.7 degrees Fahrenheit, and remained low the rest of the year, reaching -60 degrees on December 31st. The snowfall and rainfall for the year were about normal. An exceptionally heavy fall of snow occurred on January 11th, which, when followed by high velocity winds, blocked all the roads leading to the Creeks, and the streets in Dawson. During the warm period in March, the glaciers along the roads became very active, but caused little trouble to automotive traffic, as they were well taken care of by the government road crews. The ice moved out of the Yukon River at Dawson on Friday, May 13th, at 1:32 p.m. The first boat from Whitehorse, the "Casca", arrived at Dawson on June 5th. The last boat of the season left Dawson October 12th. The flow of the water in the Yukon river was at a moderately high stage most of the summer, which was a boon to river navigation. The roads to the outlying creeks were maintained in excellent condition all year.

Yukon Consolidated Gold Corporation, Limited

Property

The company maintained in good standing titles to all property deemed necessary to the pursuance of its mining operations, including dredging leases, hydraulic leases, placer mining claims, and water rights. At the end of the year a total of 351 placer mining claims were abandoned as having no economic value in the foreseeable future. Two claims which had been held under lease were turned back to the owners, as they had been dredged. The mining ground owned or controlled by the company as of December 31st, 1949 consisted of 1,105 placer mining claims, Anderson Lease No. 1, Bronson and Ray Lease No. 5, and the Boyle Concession, Lease No. 18.

Power Generation and Transmission

The company's hydro-electric power plant, which was located on the North Fork of the Klondike River, operated continuously during the year, and generated a total of 33,996,700 kilowatt-hours of power. Of this amount, 23,477,700 kilowatt-hours, or 69% of the total generated, were used by the company in its mining operations, and 6,283,100 kilowatt-hours, or 18.5% were sold to the Dawson Electric Light and Power Company, Limited, for supplying light and power to the City of Dawson. Power plant services required 1,455,200 kilowatt-hours, or 4.3% of the total generated, and transmission line and transformer losses amounted to 2,780,700 kilowatt hours, or 8.2%. The total cost of generation and transmission amounted to $111,772.10, or .376¢ per kilowatt hour sold and distributed.

The power ditches, transmission lines and sub-stations were kept in good condition. The widening of the South Fork Ditch was completed in October. The banks of both the North and South Fork Ditches were improved, particularly at the North Fork Point, where the ditch bank continued to slide.

Hydraulic Stripping

Full scale hydraulic stripping of muck overburden was carried on at operations 8, 9, 10 and 11. A small plant was operated for a part of the season at No. 6. There was a good supply of water throughout the season. However, the weather was cold most of the summer, slowing down the thawing action of the sun, and consequently lowering the water duty. The total water delivered by the Sulphur-Australia Ditch was 144,422 miner's inches, or about 96% of ditch capacity. The results of the stripping at the various plants are as follows.

Area No.	Location	Operating Dates		Water Season Days	Water Used M.I.D.	Cu. Yds Removed	Duty
		Started	Ended				
6	Lower Sulphur	May 15	July 14	59	18,175	203,848	11.22
8	Middle Sulphur	May 15	Oct. 2	140	78,600	819,488	10.43
9	Upper Sulphur	May 15	Sept. 30	135	33,922	481,638	14.20
10	Middle Dominion	May 16	Sept. 26	130	34,276	380,869	11.11
11	Hunker	May 31	Sept. 21	113	31,115	601,288	19.32
				115	196,088	2,487,131	12.68

A total of $219,609.69 was expended on the stripping operations, which gave a cost of 8.83¢ per cubic yard of muck removed. Stripped reserves at the end of 1949 totalled 13,736,697 cubic yards, a decrease of 415,692 cubic yards from 1948.

Cold Water Thawing

Cold water thawing operations were conducted at five plants, which were located at Bonanza, Middle Sulphur, Upper Sulphur, Dominion and Hunker Creeks. A total of $222,212.84 was expended on these operations, with an average cost of 5.77¢ per cubic yard thawed. The data on the thawing operations are as follows.

Area No.	Location	Operating Dates		Thawing Season Days	Water Used M.I.D.	Cu. Yds. Thawed	Duty
		Started	Ended				
4	Bonanza	May 15	Sept. 28	134	107,105	437,807	4.08
8	Middle Sulphur	May 13	Sept. 27	135	120,623	858,315	7.12
9	Upper Sulphur	May 13	Sept. 28	136	67,118	491,012	7.32
10	Middle Dominion	May 14	Sept. 28	135	135,156	1,112,858	8.23
11	Hunker	May 13	Sept. 25	133	103,676	950,986	9.18
				135	533,678	3,850,978	7.22

Thawed reserves at the end of 1949 totalled 7,435,441 cubic yards, a decrease of 234,215 cubic yards from the previous year. There was sufficient ground prepared ahead of each dredge for a full season's work in 1950.

Dredging

All of the company's eight dredges were in operation during the season, which extended from April 27th to November 26th. Adverse weather conditions in the spring reduced the production, but this was compensated to a great degree by the unusually favorable weather conditions of the fall. Dredge No. 9 began operating for the first time since it was shut down in the fall of 1942. A summary of the 1949 dredging operations is below. Dredging costs were 17.02 cents per cubic yard.

Dredge No.	Location	Bucket Size Cu. Ft.	Operating Dates		No. Days Operations	Cu. Yds. Dredged
			Started	Ended		
3	Klondike River	16	May 1	Nov. 25	208	2,469,678
4	Bonanza	16	May 6	Nov. 22	200	1,668,994
6	Lower Sulphur	7	May 1	Nov. 25	208	845,751
7	Quartz	5 3/4	May 1	Nov. 16	199	569,808
8	Middle Sulphur	7	May 3	Nov. 26	207	786,189
9	Upper Sulphur	5 3/4	May 11	Nov. 22	195	579,375
10	Middle Dominion	7	May 5	Nov. 22	201	668,240
11	Hunker	7	Apr. 27	Nov. 25	212	968,265
						8,556,300

Production

The total production for the year from the dredging operations was 59,105.83 fine ounces of gold, and 12,927.74 ounces of silver, for which the company received a total of $2,173,404.90, representing an average of 25.4¢ per cubic yard mined. The cost of producing one fine ounce of gold in 1949 was $26.17.

Shops and Transportation

The machine shop, electrical repair shop, and automotive repair garage, all located at Bear Creek, were operated in the same manner as in previous years. Truck freighting was again done under contract with the McCormick Transportation Company.

Employment

As in preceding years, arrangements were made with the National Employment Service to supply labourers. Unskilled labour was in plentiful supply at the start of the season, but as in former years, there was the usual gradual loss of man power as the season progressed. Some of the operations were short-handed during the latter part of the season, although to a lesser degree than formerly. While the quality of labour left much to be desired, it was considered the best since pre-war days. The average number of men employed during the year, by months, was as follows.

January	56	July	424
February	67	August	384
March	84	September	356
April	294	October	322
May	429	November	239
June	448	December	59

The peak employment was from June 11th to June 18th, at which time 451 men were employed. The man-shifts worked were 93,806, and the total cash expenditure for wages and salaries was $1,094,466.78.

Prospect Drilling

No drilling was done during 1949. Of the material mined during the year, 6,887,306 cubic yards were charged to proven reserves, and 1,668,994 cubic yards were dug from Dredge No. 4's reserves. There was a further charge to proven reserves of 391,836 cubic yards mined under lease on Henderson Creek by Yukon Gold Placers, Ltd., and 158,984 cubic yards which dredges Nos. 7 and 9 were unable to dig because of high bedrock. Yardage dug from proven reserves over the period 1936 to 1949 inclusive yielded on the average 103.7% of the value shown by drilling.

Miscellaneous Expenditures

Equipment and supplies not purchased locally amounted to $175,038.13, on which freight charges of $29,186.13 were paid. Local purchases amounted to $283,211.38.

Yukon Placer Mining Company

Yukon Placer Mining Company was a partnership of five or six mining men from Alaska. The company was formed to carry out mining operations under lease on ground formerly held by Yukon Explorations, Limited, which was currently in receivership. The dredge erected by Yukon Explorations Limited, was not operated in 1949. Mining with bulldozers during the year produced 2,760 fine ounces of gold from the property, which was near the confluence of Big Gold and Glacier Creeks.

Clear Creek Placers, Limited

Clear Creek Placers, Limited, held 115 placer claims, covering most of the Left Fork of Clear Creek and a small part of the Right Fork and of the main valley. After being closed for the winter, Clear Creek camp was reopened on April 18th. During the winter the valley bottom in the dredging area had filled with ice, and at the dredge had reached a maximum thickness of almost twenty feet, completely covering the main deck and all the dredge machinery. As a result of this, the dredge did not start digging until June 16th. The dredge was shut down on October 17th, after a digging season of only 122½ days. During this period the dredge advanced just over 3,000 feet up the valley. The volume of material dug and washed was about 239,400 cubic yards. However, in spite of the short season and the low yardage dug, recovery was 3,301.96 fine ounces of gold and 812 fine ounces of silver, or more than it had been for a number of years. The camp closed down on October 22nd.

In order that the gravel ahead of the dredge might thaw naturally, about 25,000 cubic yards of moss and "muck" were removed from above the gravel by using bulldozers to scrape the material into the creek or to divert the creek through it. This was considerably less than usual, partly because the dredge reached such a high elevation while approaching the head of the valley, that the thickness of muck was less than in previous years. Unfortunately, there was also less water available for removing overburden and for dredging operations generally. No mechanical thawing was done.

Some work was done in the "Main" Clear Creek area in preparation for future operations there, and approximately 15,000 cubic yards of material were removed. The usual maintenance work was done on the roads and airport. Throughout the season there were 19 men employed at Clear Creek.

Yukon Gold Placers, Limited

Yukon Gold Placers, Limited carried out operations at Henderson and Thistle Creeks during 1949. The Henderson Creek property consisted of 144 placer claims situated mainly on the left fork of the creek. The claims were owned by the Yukon Consolidated Gold Corporation Ltd., and were mined by Yukon Gold Placers, Ltd. under agreement with the owners.

Henderson Camp was reopened after the winter on April 16th, and was closed at the end of the season on October 9th. A crew of 25 men was employed during this time.

The Henderson Creek dredge started digging on June 14th, and after a season of 119½ days, shut down on Oct. 1st. During this period, the dredge moved up-valley a distance of over 4,600 feet, and dug and washed 253,500 cubic yards of material. Total recovery was 5,596.87 fine ounces of gold, and 1,853 ounces of silver. Operations were hindered to some extent by floods early in the season and a shortage of water later. The shortage of water forced the dredge to shut down when cold weather started, several weeks earlier than planned.

No mechanical thawing was done, as the ground thawed naturally after the surface of the gravel was exposed by mechanical and hydraulic stripping. During stripping operations, a total of 190,000 cubic yards of material were removed.

The usual maintenance work was done on camp, roads and airport.

The Thistle Creek property of Yukon Gold Placers, Limited consisted of 148 claims held by the company on Thistle Creek. Thistle Camp was reopened after the winter on April 16th, and was closed at the end of the season on October 23rd. The maximum number of men employed was 28, with the average being about 20.

The assembling of a 4½ cubic-foot, steel-pontoon bucket-line dredge was completed on July 10th, and it started digging at once. The dredge entered the main mining area on July 31st and moved down the valley over 3100 feet before closing for the season on October 16th, after a run of 98½ days. During the first part of the run, digging was hampered by deep, boulder filled, and incompletely thawed ground, and recoveries were very considerably lower than expected. However, by the end of the season the dredge was digging well and recoveries were normal. In all, 213,000 cubic yards of material were dug and washed, and 1,439.36 fine ounces of gold and 176 fine ounces of silver were recovered.

No mechanical thawing was done at Thistle Creek. Ground preparation by means of mechanical and hydraulic stripping involved the removal of 194,000 cubic yards of surface material.

The usual maintenance work was done on the roads, airport and camp.

Other Placer Operations

Miller Creek Placers continued operations by bulldozer and sluice box method on claims Nos. 11 to 20 Above Discovery on Sixtymile Creek. During their operating season, 1,433.842 fine ounces of gold were produced.

Bedrock Mining Company was a new company which operated on Bedrock Creek. They recovered 582.73 fine ounces of gold.

Reno Gold Mines, Limited continued their operations on Canadian Creek, and recovered 252.80 fine ounces of gold.

Mr. B. Bratsberg continued operations on Gold Bottom Creek using a sluice box, and bulldozer. He recovered 504.59 fine ounces of gold.

Mr. John King continued bulldozer operations on claims on Little Blanche Creek. His production was 214 ounces of gold.

The Cole brother's main operations were on Homestake Gulch, a tributary of Upper Bonanza Creek, after they abandoned their former operations on Hunker Creek. They recovered 584.82 fine ounces of gold.

Mr. T. Gustafson carried on extensive operations on Moose Creek, in the Fortymile district. It was understood that he had a successful season, but his production figures were not known.

In addition, a number of individual placer miners carried on operations on a small scale, some with very satisfactory results.

MAYO DISTRICT

In the Mayo District, 3 new placer claims and 95 renewals were issued, making a total of 98 placer claims in good standing. Placer leases covering 8 miles were also issued.

Very little placer mining was carried on in the district in 1949. Fred Taylor did not operate on his claims on Dublin Gulch. E.C. Bleiler worked on his ground on Highet Creek, but his production was not reported in Mayo as he shipped his gold through the Bank of Montreal at Dawson. W. McComb took an option on the Reynold's ground on Ledge Creek, and did preparatory work for operations in 1950.

WHITEHORSE DISTRICT

There were 9 new placer claims and 99 renewals issued, making a total of 108 placer claims in good standing. There were also 23 new prospecting leases covering 76.5 miles issued, and 3 leases covering 4 miles were renewed.

Gold production during 1949 was 2,524.25 ounces, including 294.65 ounces produced from Canadian Creek in the Dawson District, but on which royalty was paid in the Whitehorse District, and 36.00 ounces used locally on which no royalty was paid. Gold production by location was as follows.

Bullion Creek	37.85 ounces
Burwash Creek	2,046.05 ounces
Canadian Creek	294.65 ounces
Fourth of July Creek	15.20 ounces
Hootalinqua Creek	4.35 ounces
Nansen Creek	39.35 ounces
Selwyn Creek	23.00 ounces
Tatamagouche Creek	7.95 ounces
Whitestone Creek	12.45 ounces
Miscellaneous	7.40 ounces
Used Locally (No record)	36.00 ounces
Total	2,524.25 ounces

Kluane Dredging Company continued to operate on Burwash Creek, but their recovery was 1,310.34 fine ounces, or 236 ounces less than the previous year.

Burwash Mining Company, Limited, also continued their operations on Burwash Creek, but concentrated on working their way through a one mile canyon, and constructing a road behind them, by means of which they hoped to open up extended ground upstream. Their

1949 production of 392.76 fine ounces was a third less than their 1948 production.

Bates Creek Placer Company, Limited closed down its operations on Bullion Creek and released the claims held under option to the original owner, Karl Strandberg. He produced 37.85 ounces by hand operations.

The partnership of Messrs. McCauley and Vass was terminated when one of the partners, Mr. W.F. McCauley, died during the season. Little progress was made in efforts to begin production with heavy equipment on their sixteen claims on Shorty Creek.

T. Comeau continued with road construction work to gain access to his property in the Kusawa Lake Area.

Mr. and Mrs. Frank Dupont continued their development work on Little Gold Creek and Selwyn Creek, and recovered twenty-three ounces by hand operations.

Karl Paulsen recovered 39.35 ounces of gold from his claims on Nansen Creek.

New, development operations commenced on Fourth of July Creek, where 15.2 ounces of gold were recovered, and on Whitestone Creek where 12.45 ounces were recovered.

There was renewed interest in 1949 in the recovery of native copper from alluvial deposits in the Upper White River Area. The Pewabic Mining Syndicate Limited of Juneau and Fairbanks, Alaska, carried out prospecting along Kletsan Creek, on both sides of the Alaska-Yukon boundary. During the winter, Mr. Norman Stines prospected in the Upper White River area in a effort to locate alluvial deposits containing quantities of native copper. His prospecting work included drilling.

CHAPTER II.

MINERAL INDUSTRY OF YUKON, 1950

INTRODUCTION

Information on the mineral industry in Yukon in 1950 was compiled from reports by A.H. Gibson, Commissioner, and W.M. Emery, Whitehorse Mining Recorder, from correspondence of A.M. Nordale of Yukon Consolidated Gold Corporation, and from publications of the Emergency Gold Mining Assistance Act.

LODE MINING

Lode exploration activity continued at approximately the same level as in previous years during 1950. The new Mayo-Whitehorse Road was playing an important part in the development of the Mayo area, and its construction was a spur to that development. A side effect of the construction of this road was announcement by the British Yukon Navigation Company that their boats would not be operated on the Stewart River in 1951. Boats that were to continue operating were converted from wood burning to oil burning after the 1950 navigation season.

In the Dawson District, there were only 62 lode claims in good standing. There were 1,762 claims in good standing in the Mayo District, and 160 quartz leases in good standing. In the Whitehorse District, 152 new claims were staked, and 167 claims were renewed. There were also three coal leases in good standing in the Whitehorse District.

Mineral production from lode operations during 1950 (likely calendar, rather than fiscal year) was at least 14,781 tons of lead and zinc concentrate and high grade lead-silver ore containing 13,977,031 pounds of lead, 3,368,848 ounces of silver, 7,040,569 pounds of zinc, and 80,585 pounds of cadmium, all from the Elsa-Keno Hill area.

There were 3,360 tons of coal mined at the Carmacks area Tantalus Mine of Yukon Coal Co. Ltd.

DAWSON DISTRICT

There was no production during 1950 from the claims scattered throughout the district. The claims were held by individuals, who did little prospecting and only sufficient assessment work to keep the claims in good standing. None of the claims were in a block of claims of any size.

MAYO DISTRICT

Individual prospectors were again not very active in 1950, and properties held by them were generally under option to others. Exploration activities centered on developing known mineralized properties, and claim staking was generally peripheral to known existing claim blocks. There were 164 claims staked on Stand-to Mountain during the year, but no production was reported. New staking was also done on Rambler Hill adjacent to existing claims.

United Keno Hill Mines, Limited

United Keno Hill Mines, Limited, carried on by far the most extensive operations in the Mayo area. The company continued development work at the Hector, Calumet, No Cash, Bermingham, Dixie, and Elsa Mines during the year. They mined 77,670 tons of ore from which 9,663 tons of lead-silver concentrate and 5,042 tons of zinc concentrate were produced. The concentrate produced was estimated to contain 3,349,848 ounces of silver, 13,916,231 pounds of lead, 7,040,569 pounds of zinc, and 80,585 pounds of cadmium. Shipments of concentrate to the smelter at Trail, B.C. totalled 13,690 tons.

The company employed an average of 275 men throughout the year.

Other Lode Operations

Consolidated Yukeno Mines, Limited held 135 claims. The Keno and Rio groups on Galena Hill were turned over to Mackeno Mines, Limited, a subsidiary company, for development. Mackeno Mines, Limited began development of the Rio group on Nov. 1st. The company employed 23 men to start work on a 1,600 foot cross-cut from the Rio claim to intersect the downward projection of the McLeod shaft on the Keno claim. A second adit on the McLeod vein was also planned.

Keno Mines Limited held 12 claims on Keno Hill. No work other than representation work was done on the property.

Mayo Mines, Limited owned the Ram claim on Sourdough Hill, two claims on Galena Hill, and a group of nine claims on Cobalt Hill. It also had an option on the "Tundra" claim on Sourdough Hill. Operations for the season were confined to a small "highgrade" development cut on the "Ram" claim. There were 76 tons of ore shipped. It was reported to average 250 fine ounces of silver to the ton, and to contain 40% lead.

Bellekeno Mines, Limited took over a property on Sourdough Hill and also owned a group of 16 claims. A crew of ten men under the direction of an engineer began work on the property in November. They explored the vein exposed in an adit, which was driven for 30 feet with the object of developing sufficient ore for milling.

Canadian Explorers, Limited acquired a large number of properties by option and purchase during

1950. One group of these claims was turned over to Mount Keno Mines Limited for development. No plans were made for the remaining properties.

Brewis Red Lake Mines, Limited carried on prospecting on a small scale.

Assay Office

The assay office was maintained at Keno by the territorial government. There were 637 samples of rock received from all parts of the territory, although more than 65% came from Keno, Galena, and Sourdough Hills and vicinity. There were 913 assays or quantitative analyses made. The analyses made were gold and silver, 637; lead, 224; zinc, 43; antimony, 4; copper, 4; and tin, 1.

WHITEHORSE DISTRICT

There was increased interest in the Whitehorse District in prospecting for base metal showings during 1950. Minerals such as antimony and manganese were also being sought. However, the Whitehorse District was still the least productive mining district in the territory. Companies active in the Whitehorse District in 1949 continued their work in 1950. An innovation in the prospecting field was supplied by Helicopter Exploration Company, Limited, which used a Hiller helicopter to transport its eight employees to inaccessible areas. Work was done in the Atlin Lake district and along the St. Elias Range, covering a belt approximately 20 miles southwest of the Alaska Highway. Reports were that the operation was a success, but specific details concerning any discoveries were not made available.

Hudson Bay Exploration and Development Company, Limited made discovery of what was believed to be a reasonably high-grade silver-lead-zinc deposit in the vicinity of Fuller Lake. Seven claims were staked and it was understood that more extensive prospecting and preliminary development work would be undertaken during 1951. Samples from the occurrence assayed 12% lead, 12% zinc, and 1% copper. This company also took an option on a group of claims held by Messrs. Smith and Henderson in the Dugdale Lake area at the south end of the Whitehorse Copper Belt. Twenty-three new claims were staked and it was expected that drilling would be carried out in 1951.

Noranda Mines Limited continued its development work on the South Nahanni group of claims located in the Hyland Plateau area, in conjunction with New Jersey Zinc Company, Incorporated. The property consisted of 48 claims, half of which were staked during 1950. Further diamond drilling and development work were planned.

Brown McDade Mines Limited made no effort during 1950 to reopen its gold mine, but a group of 20 claims known as the Divide group was staked at Iron Creek to cover a new discovery of gold-bearing quartz.

Yukon Coal Company, Limited continued their operations in 1950. They employed 10 men, and produced 3,360 tons of coal. The coal was screened into two grades, domestic and fines. Most of this coal was used by the United Keno Hill Mines, Limited. A small proportion was shipped to Dawson and a negligible amount was shipped to Whitehorse.

Messrs. E. Forrest and W. Langham held 11 claims on Mount Freegold. During 1950, they sorted and bagged 3 tons of ore, and shipped it to Whitehorse. Other operations in the area included a coal lease covering four square miles on Granite Creek, held by Mr. Paul Birckel. Owing to the lack of road communication with the lease, no development work was done.

PLACER MINING

The amount of placer gold recovered in the territory during 1950 on which royalty export tax was paid was 117,545.0 ounces produced as follows: 116,578.7 ounces, Dawson District, and 966.3 ounces, Whitehorse District. No gold shipments were made throught the Mayo Mining Recorder's Office during the year. Approximately 57% of the gold recovered was from the Dawson area operations of Yukon Consolidated Gold Corporation, Limited.

There were 1,222 placer claims in good standing in 1950. Prospecting leases covering 131 miles were issued during the year.

DAWSON DISTRICT

In the Dawson District, 1,004 new and restaked claims and renewals were issued during the year. Fourteen prospecting leases covering 81 miles were also issued during the year. Gold production from the district, at 116,578.7 ounces, was 14,209.1 ounces higher than in 1949.

Following the unusually warm fall of 1949, which extended well into December, the weather changed abruptly, and the temperatures from then to the end of February, 1950 were much colder than normal, averaging -27.6 degrees Fahrenheit, with a minimum of -61 degrees on December 31st. During March the temperatures were considerably above normal, and water began to flow in many of the creek channels. After this warm period, temperatures were again much colder than usual, and the spring was a very backward one. Snowfall during the winter was below normal, and the rainfall was even less, with a little precipitation in May and in July, after which practically no rain fell. The summer of 1950 was one of the driest on record. This condition hampered mining operations in many ways, but the dry, sunny days were a benefit in others.

The local roads were in excellent condition throughout the year, due to the exceptionally dry weather and to the maintenance and care of the government road crews.

The ice moved out of the Yukon River opposite Dawson on May 10th, and the first boat arrived from Whitehorse on June 8th. The flow of water in the Klondike and Yukon Rivers was at a low stage throughout the summer.

Cold weather came unusually early in the fall, and closed down all of the dredges on November 5th. The cold spell continued through the first week in December, after which temperatures were moderate until the end of the year.

Yukon Consolidated Gold Corporation, Limited

Property

The company maintained in good standing titles to all property deemed necessary to the pursuance of its mining operations, including dredging leases, hydraulic leases, placer mining claims, and water rights.

During the year, control of four placer claims was acquired through lease. The total number of claims owned or controlled as of December 31st, 1950 was 1,109. In addition, the company held three hydraulic leases, Nos. 1, 5 and 18. Two prospecting leases were staked on Quartz Creek and Little Blanche Creek, a tributary of Quartz Creek.

Power Generation and Transmission

The company's hydro-electric plant, which was located on the North Fork of the Klondike River, operated continuously during the year, and generated a total of 33,444,400 kilowatt-hours of power. Of this amount, 22,980,500 kilowatt-hours, or 68.7% of the total generated, were used by the company in its mining operations, and 6,020,900 kilowatt-hours, or 18.0%, were sold to the Dawson Electric Light and Power Company, Limited, for supplying light and power to the City of Dawson. Power plant services used 1,280,400 kilowatt-hours, or 3.8% of the total generated, and transmission line and transformer losses amounted to 3,162,600 kilowatt-hours, or 9.5%. The total cost of generation and transmission amounted to $116,158.33 or .347¢ per kilowatt-hour sold and distributed.

There were no serious interruptions in power during 1950. The essential maintenance work on power lines and substations was carried on, as in other years. The gate structure at the intake of the South Fork Ditch was rebuilt, and the banks of both the North Fork and South Fork Ditches were built up with gravel, where required.

Hydraulic Stripping

Full scale hydraulic stripping of muck overburden was carried on at operations Nos. 8, 9, 10 and 11. The stripping was handicapped throughout the season by an acute shortage of water. However, the warm, sunny weather provided good thawing action, so a relatively high muck-removal duty was obtained with the water used.

Operations Nos. 8 and 9 received water from the Sulphur-Australia Ditch, while Nos. 10 and 11 depended on the local creek streams for their supply. The Sulphur-Australia Ditch delivered a total of 117,120 miner's inches of water, or approximately 54% of the ditch capacity. The results of the stripping at the various plants are as follows.

Area No.	Location	Operating Dates Started		Water Season Days	Water Used M.I.D.	Cu. Yds. Removed	Duty
		Started	Ended				
8	Middle Sulphur	May 10	Oct. 3	145	58,025	617,094	10.63
9	Upper Sulphur	May 8	Sept. 30	144	35,962	678,275	18.86
10	Middle Dominion	May 11	Sept. 21	132	31,630	274,080	8.67
11	Hunker	May 10	Sept. 28	133	31,955	468,442	14.66
				138	157,572	2,037,891	12.93

A total of $233,906.13 was expended on the stripping operations, which gave a cost of 10.99¢ per cubic yard removed.

Cold Water Thawing

Cold water thawing operations were conducted at five plants, Nos. 6, 8, 9, 10 and 11, located at Lower Sulphur, Middle Sulphur, Upper Sulphur, Middle Dominion and Hunker Creeks, respectively. The warm weather was a boon to the thawing operations and, although there was a definite, but not critical, lack of make-up water at times, the high water temperatures more than compensated for it.

A total of $247,855.45 was expended on the thawing, with an average cost of 5.96¢ per cubic yard thawed. The detailed data on the thawing operations are as follows.

Area No.	Location	Operating Dates		Water Season Days	Water Used M.I.D.	Cu. Yds. Thawed	Duty
		Started	Ended				
6	Lower Sulphur	May 11	Sept. 27	140	102,625	648,525	6.32
8	Middle Sulphur	May 7	Sept. 27	144	153,104	879,763	5.75
9	Upper Sulphur	May 9	Sept. 27	142	86,903	722,108	8.31
10	Middle Dominion	May 11	Sept. 27	140	152,370	1,223,346	8.03
11	Hunker	May 10	Sept. 27	141	126,891	681,815	5.37
				141	621,893	4,155,557	6.68

Dredging

The company's dredges operated a total of 1,488 dredge days during the season. This was 152 dredge days less than in 1949, due principally to the late spring and the early close-down in the fall because of adverse weather conditions. The operating season extended from April 25th, when Dredge No. 10 at Middle Dominion started, to November 5th, when all dredging was brought to a close. A summary of the 1950 dredging operations is below.

Dredge No.	Location	Bucket Size Cu. Ft.	Operating Dates Started		Ended		No. Days Operations	Cu. Yds Dredged
3	Klondike River	16	May	4	Nov	3	183	1,937,726
4	Bonanza	16	May	4	Nov.	4	184	906,359
6	Lower Sulphur	7	May	10	Nov.	5	179	727,206
7	Quartz	5 3/4	May	2	Oct.	27	179	347,853
8	Middle Sulphur	7	May	1	Nov.	5	188	821,630
9	Upper Sulphur	5 3/4	May	1	Nov.	5	188	561,191
10	Middle Dominion	7	Apr.	25	Nov.	5	194	743,704
11	Hunker	7	Apr.	26	Nov.	5	193	790,295
								6,835,964

Production

The total production for the year from the dredging operations was 66,610.60 fine ounces of gold, and 14,663.01 ounces of silver, for which the company received a total of $2,540,841.38 representing an average of 36.7¢ per cubic yard. Had the dredges been able to continue operating until November 22, as in 1949, instead of closing on November 5th due to extreme cold weather, production would have been increased by approximately $250,000.00.

Shops and Transportation

The machine shop, electrical repair shop and automotive repair garage, all located at Bear Creek, were operated in the same manner as in preceding years. Truck freighting was done again under contract with McCormick Transportation Company, and the transporting of men and parcels was done under contract with Cook's Taxi Service.

Reserves

Stripped reserves totalled 12,998,791 cubic yards at the end of 1950. Thawed reserves were 8,124,945 cubic yards.

Employment

As in previous years, arrangements were made with the National Employment Service to supply all labour requirements. Unskilled labour was in plentiful supply at the beginning of the season, and continued to be reasonably so throughout the summer. There was the usual loss of manpower as the working season progressed, but it was not enough to seriously affect the operations at any time. Skilled labourers, such as machinists, carpenters, electricians and mechanics continued to be difficult to get. The average number of men employed during 1950, by months, was as follows.

January	52	July	400
February	62	August	380
March	72	September	358
April	298	October	332
May	457	November	144
June	432	December	56

The peak employment was from May 6th to May 13th, at which time 466 men were employed. The total of man shifts worked during the year was 90,442. The total cash expenditure for wages and salaries was $1,050,752.02

Miscellaneous Expenditures

Equipment and supplies not purchased locally amounted to $245,929.00, on which freight charges of $44,971.69 were paid. Local purchases amounted to $315,383.51.

Yukon Placer Mining Company

Yukon Placer Mining Company carried out bulldozing and sluicing operations on Sixtymile, Glacier, and Big Gold Creeks during 1950. Operations began April 15, and finished October 31. There were 16 men employed. Production to July 31 was 250 ounces. Total production for the season is not known.

In addition to their bulldozer operations, Yukon Placer Mining Company began dredging with the former Yukon Explorations, Limited 4 cubic-foot, bucket-line diesel dredge during the first week of August, and continued until October 1. The peak number of men employed for all operations was 40. Production figures for the dredging operation are not available.

Clear Creek Placer Mines, Limited

Clear Creek Placer Mines, Limited held 118 claims covering most of the Left Fork of Clear Creek, and a small part of the Right Fork, and main valley of the creek. Clear Creek Camp opened April 16, 1950, and the company's diesel-electric, pontoon dredge, capable of digging 2,125 cubic yards in 24 hours, began operating on May 26th. It operated continuously until October 28th, and mined 419,700 cubic yards of material grading 0.011 fine ounces of gold per cubic yard. Production was 4,716 fine ounces of gold, and 1,205 fine ounces of silver. Stripping ahead of the dredge, and ground preparation on the Right Fork and main Clear Creek involved the removal of 91,000 cubic yards of material. No mechanical thawing was done, as the ground thawed naturally when the overburden was removed. Maintenance of 35 miles of road, and the local airstrip were carried out as usual. Clear Creek Camp was closed for the winter on November 6th.

Yukon Gold Placers, Limited

Yukon Gold Placers, Limited carried out operations at Henderson and Thistle Creeks during 1950. The Henderson Creek property consisted of 144 claims, situated mainly on the left fork of the creek, owned by Yukon Consolidated Gold Corporation, and mined under agreement with the owners. Henderson Camp opened after the winter, on April 17th, and was closed at the end of the season on October 13th. A crew of 22 men was employed.

The Henderson Creek dredge was a diesel operated, pontoon dredge capable of handling 3,000 cubic yards in twenty-four hours. It operated continuously from May 25th to October 4th, and processed 193,800 cubic yards of material. Production was 4,262 fine ounces of gold, and 1,636 fine ounces of silver.

Ground preparation for thawing involved removal of 189,000 cubic yards material by bulldozers and water. No mechanical thawing was done as the ground thawed naturally after overburden was stripped off. A new airport with a 2,000 foot runway was built close to camp, and maintenance work was done on roads.

The Thistle Creek property of Yukon Gold Placers, Limited, consisted of 159 claims held by the company on Thistle Creek. Thistle Camp was opened after the winter, on April 16th, and closed at the end of the season on October 27th. The dredge started digging May 31st, and operated continuously until October 23rd. It processed 329,700 cubic yards of material, from which 2,888 fine ounces of gold, and 358 fine ounces of silver were recovered. Ground was prepared for natural thawing by removal of 229,000 cubic yards of material using hydraulic methods, and bulldozers. Maintenance work was also done on roads, the airport, and camp. Twenty-two men were employed throughout the season.

Yukon Gold Placers, Limited also did prospecting and assessment work on Black Hills Creek, where a number of properties were held under option.

Other Placer Operations

Miller Creek Placers began mining May 1st, and finished October 19th. They employed 10 to 12 men, and operated with three bulldozers and a sluicebox on Sixtymile Creek. Their production for the season was approximately 4,000 ounces of gold. This operation was one of the few which did not suffer from a lack of water during 1950.

Bedrock Mining Company, an associate of Yukon Placer Mining Company, carried on exploratory and representation work on Bedrock Creek during 1950.

Reno Gold Mines, Limited held 28 claims on Canadian Creek, 2 on Casino Creek, and 1 on Patton Gulch. The company was apparently inactive in 1950, except for the completion of representation work, although mining operations were carried out on their property in previous years.

Mr. B. Bratsberg continued mining on Gold Bottom Creek, using a bulldozer and sluice box. He and one employee mined from May 5th to September 30th, and recovered 355 fine ounces of gold.

Messrs. J. King and G. Winans used bulldozer and hydraulic methods to mine on Quartz Creek. Operations began May 20th, and finished September 25th. Overburden up to 18 feet deep was removed over 20,000 square bedrock feet. Values were found on the bedrock, and in the first four feet of gravel above bedrock. Production was 254 fine ounces. The water shortage of 1950 adversely affected production at this operation during August.

The Cole Brothers, M.D. and L.D. Cole operated using two bulldozers and hydraulic mining methods. They mined on properties on Homestake Gulch, Bonanza Creek, Dominion Creek, and All Gold Creek, some of which they owned, and some of which they held under lease. They operated from April 15th until October 15th, but experienced water shortages throughout the season. With 4 employees, their total production was 575.08 fine ounces of gold.

The Boutillier Brothers mined using hydraulic methods on Adams Gulch. They began work April 1st, and finished October 3rd. Their total production was 147.81 fine ounces of gold.

Mr. J. Bremner, his son, and one employee mined on Last Chance Creek using hydraulic equipment. Water was supplied partly by dithces, and partly by a diesel-operated pump taking water from Last Chance Creek. Production for the season was 150.32 fine ounces of gold, 69 ounces less than was produced in 1949. The decrease was due partly to the shortage of water in 1950.

Messrs. Colbourne and Schink operated with two employees on a hillside property on Hunker and Hester Creeks. They worked from April 15th to October 8th using hydraulic methods, and one bulldozer. Their total production of 110 ounces of gold was affected by the shortage of water, and by ground preparation work.

Mr. R.S. Gould carried on a hydraulicking operation on several hillside claims on Hunker Creek, where he had been mining for approximately 30 years. In 1950, and for a few years prior to that, he was aided by his son J.A. Gould, with a bulldozer. They began mining April 1st, and finished operations November 1st. Their production for the season was approximately 250 ounces of gold.

Mr. R.E. Troberg and one employee used hydraulic and bulldozer methods to mine on Bonanza Creek. They began operations on April 26th, and finished October 1st. Their production for the 1950 season was 280 fine ounces of gold. Mr. Troberg also held a mining lease on 15 quartz claims on Hunker Creek, on which he did development and prospecting work during the winters. By 1950, he had completed a 280 foot adit.

Thure Gustafson, and three employees used bulldozers and ground-sluicing methods on his Moose Creek property during 1950. They began work April 10th, and finished October 15th. Their production to July 31st was 170 ounces. Production figures for the entire season were not available.

In addition to the foregoing placer operations there were quite a few individual miners and prospectors on various creeks in the Dawson District. In the main, they owned one or two claims from which they managed to make a fair living.

MAYO DISTRICT

In the Mayo District, there were 98 placer claims in good standing. Placer leases covering 19 miles were also issued. No gold production was reported through the Mayo Mining Recorder's Office during 1950. Placer activity in the area was practically nonexistant during the year.

WHITEHORSE DISTRICT

There were 31 new placer claims and 89 renewals issued, making a total of 120 placer claims in good standing. There were also 10 new prospecting leases covering 25 miles issued, and 4 leases covering 6 miles were renewed.

Gold production for the year was 966.30 ounces, or 1,521.95 ounces less than in 1949. Gold production by location was as follows.

Bullion Creek	27.15 oz.
Burwash Creek	826.60 oz.
Shorty Creek	25.20 oz.
Wolverine Creek	1.50 oz.
Little Gold Creek	4.35 oz.
Sheep Creek	1.35 oz.
Thompson Creek	14.55 oz.
Goat Creek	9.50 oz.
Miscellaneous	56.10 oz.

Kluane Dredging Company, Limited closed their operation on Burwash Creek, after only a few weeks operation at the beginning of the season, having worked out the ground under their control. The company was negotiating for new ground on which to operate their heavy equipment, particularly on the tributaries of Kluane Lake.

Burwash Mining Company Limited was the biggest producer in the Whitehorse District, but the rate at which their work progressed was unusually slow owing to the difficult terrain encountered in the canyon where they were working, and the fact that a road had to be constructed as the operation progressed, with relatively little gravel encountered. Native copper nuggets were recovered in an area between vein exposures on either face of the Canyon. By the close of the season, the road through the canyon had been practically completed and a new campsite was selected. Total gold production for the season was 691.27 fine ounces.

Other individual operators carried out work in relatively small proportions compared to previous years, but it was anticipated that the revival of the Gold Mining Assistance Act in revised form might stimulate activity during 1951.

CHAPTER 12.

MINERAL INDUSTRY OF YUKON, 1951

INTRODUCTION

Reports by F. Fraser, Commissioner, G.A. McIntyre, Mayo Mining Recorder, W.M. Emery, Whitehorse Mining Recorder, and W.C. Sime, Territorial Assayer were used in compiling information on the mineral industry in Yukon in 1951. Additional information came from correspondence of A.M. Nordale, resident manager of Yukon Consolidated Gold Corporation, and from publications of the Emergency Gold Mining Assistance Act.

LODE MINING

Lode exploration activity continued at the level of previous years. Activity centered on known mineral occurrences, particularly in the Mayo area, where the mining operations of United Keno Hill Mines, Limited were expanding.

In the Dawson District, there were 64 new claims recorded, and 34 claims were renewed, making 98 claims in good standing. There 2,161 claims in good standing in the Mayo District, and 165 quartz leases in good standing. In the Whitehorse District, 467 new claims were staked, and 256 claims were renewed. There were also 7 quartz leases in good standing in the Whitehorse District.

Mineral production from lode operations in the Elsa-Keno Hill area during 1951 (figures are likely for calendar rather than fiscal year) was at least 14,715 tons of concentrate containing 13,024,537 pounds of lead, 3,579,188 ounces of silver, 7,617,270 pounds of zinc, and 100,561 pounds of cadmium.

Yukon Coal Company produced approximately 5,000 tons of coal at its Carmacks area Tantalus Mine.

DAWSON DISTRICT

During the year there was no hard-rock mining in the Dawson District. Assessment work on recorded quartz claims was carried out to maintain claims in good standing in accordance with the Act. Most of the claims covered gold prospects, with some on small showings of other minerals such as silver, lead, copper and antimony. The claims were widely scattered in the District.

The group of 16 claims held since 1947 by Mr. Jack Meloy and his partner Mr. Afe Brown at the head of Casino Creek, covered a silver-lead showing. There was no production up to 1951.

During the year, a group of 19 claims was staked around three old Crown Granted Mineral Claims, in the vicinity of Little Twelvemile River, a tributary of Twelvemile (or Chandindu) River. The claims were held by a group calling themselves the "Klondike Exploration Syndicate", who reported they intended to carry out an exploratory program on the property in 1952. The claims covered a silver-lead-zinc occurrence which had been known for many years. The area was staked and restaked many times, but there was no production to 1951.

There were two claims in the immediate vicinity of Dawson, nine claims at the mouth of Goldbottom Creek on Hunker Creek, and one claim approximately 30 miles up the Klondike River at "Asbestos Bluff", all of which covered asbestos prospects. The existence of this asbestos had also been known for many years, but was never thought to be worthwhile to mine. The owners of the claims reported, however, that they expected representatives of outside mining concerns to investigate their properties in 1952.

Mr. Anker Hoidahl staked five claims at the head of Mason Creek, a tributary of Annett Creek. He reported a highly mineralized area, bearing tungsten, molybdenum and gold. Mr. Hoidahl freighted oil and equipment by air into the area from Aklavik during the winter of 1951, in order to commence development work in the spring.

MAYO DISTRICT

Individual prospectors were again not very active in the Mayo District in 1951. Exploration activities centered on developing known mineralized properties, preparatory to bringing the properties into production. Unless a new mining operation was begun in 1952, it was expected that the mining boom being experienced by the area would end.

During the time the Mayo-Minto Section of the Mayo-Whitehorse Highway was being built, a number of claims were staked near Summit Roadhouse between Pelly and Stewart Rivers. These claims were all allowed to lapse. A large number of the 164 claims staked on Stand-to Mountain during 1950 were allowed to lapse. Only representation work was done on the others. A number of the claims staked on Rambler Hill in 1950 were also allowed to lapse. Only representation work was performed on claims in the Highet Creek area. A group of 8 claims was held by Hoyle Mining Company on showings on Alverson Gulch reported in 1921 by Cockfield. No work was performed on these claims. Only representation work was done on the Galena Hill properties of North Denison Mines, Limited and Packeno Mines, Limited.

Some prospecting was done in the Secret Creek, Lime Creek, and Lynx Dome areas, and in an area approximately 10 miles northeast of Lynx Dome.

Although a substantial number of new claims were staked during the year, many claims recorded in the previous year were allowed to lapse through nonperformance of assessment work.

Ankeno Mines, Limited

Ankeno Mines, Limited began operations in July on the Star and Petain claims, and at the year's end had five men on the payroll. They had no production. A geological survey of the claims was made and old trenches and pits cleaned out and sampled. As a result of this work it was decided to prospect the claims by drilling a cross-section beginning on the "Star" claims, and proceeding northwesterly across the "Petain No. 2" and "Petain" claims. By the end of the year six holes, totalling 930.0 feet, had been put down on the "Star" claim. The cross-section was scheduled to be completed in 1952.

Bellekeno Mines, Limited

Bellekeno Mines, Limited completed its first full year of operations in November of 1951. They had an average of twelve men on the payroll. There was no production. During the year, underground work proceeded continuously on the 100-foot adit level. The workings were on the "Whipsaw", "Extension", "Apex" and "Eureka" claims. Underground work completed during the year consisted of 585.0 feet of crosscutting, and 1,060.0 feet of drifting. About two thousand yards of earth was moved by bulldozer in surface exploration. Plans were to drive a second adit one hundred and ten feet vertically below the first level in 1952. A large body of milling ore was encountered on the property.

Brewis Red Lake Mines, Limited

Brewis Red Lake Mines, Limited continued exploratory work on G.P. Besner's "Black Cap" group. The average number of men employed during the year was nine. There was no production from this operation. A crosscut adit was driven seven hundred and fifty feet into Keno Hill at the 4,450 elevation, in an attempt to intersect the "Lucky Queen" vein. In addition one hundred and twenty feet of drifting was completed on a subsidiary vein encountered in the crosscut. Early in the year a forty foot prospect shaft was sunk on the vein outcrop near the northeast corner of the "Black Cap" claims. Approximately 1,000 feet of diamond drilling was done. Considerable underground drilling was planned for 1952.

Comstock Keno Mines, Limited

Comstock Keno Mines, Limited held a group of claims in the Faro Gulch area of Keno Hill under option. A surface examination of the claims was made during the spring, and the old trenches and pits on the "Nabob" vein were cleaned out and sampled, and the lower adit on the "Gambler" vein was cleaned of ice and the workings examined.

Surface trenches along the "Nabob" vein for a length of two hundred and fifty feet showed narrow bands of galena, two inches to four inches wide, in a siderite vein averaging 4.0 feet wide. A composite sample of the sulphides ran 135 ounces silver per ton and 57.15% lead. Drifting along this vein was started late in October from the crosscut adit put in by previous owners. Extremely cold weather conditions in December compelled the suspension of this work until spring. A total of one hundred and sixteen feet of drifting was done along the vein, with only scattered mineralization in evidence. The drift, however, had not reached the area below the trenches showing the better mineralization on the surface.

The old workings, in conjunction with the lower adit on the "Gambler" vein disclosed narrow bands of galena and freibergite when cleaned out. The veins were too narrow to be considered ore where exposed.

Jersey Yukon Mines, Limited

Jersey Yukon Mines, Limited began operations in July, and at the end of the year, had twenty-four men on the payroll. There was no production from the property on Galena Hill or the Butyer ground on Keno Hill. The work done consisted of a geophysical survey, and pitting and bulldozing on the Galena Hill ground. A building program was begun in the fall on the Butyer property on Faro Gulch. An adit was started on the "Stone" claims in November, and was driven six hundred feet. Further surface work on the Galena Hill claims, and further work on the adit were planned for 1952.

Klondike-Keno Mines, Limited

Klondike-Keno Mines, Limited held a large group of claims in the McQuesten valley, and on the south slope of Galena Hill. It also held the Besner-Milosevich Group under option. Only representation work was performed on the McQuesten Valley and Galena Hill claims. During the latter part of 1951, a 6,000 foot diamond drilling program was carried out on the Besner-Milosevich ground, but the results were not reported.

Lustre Yukon Mines, Limited

This company employed two men on the "Homestake" Group on Bunker Hill during September, October and November. Work was confined to trenching and road building. Further prospecting was planned for 1952.

Mackeno Mines, Limited

Mackeno Mines, Limited employed thirty-five to forty men in an underground program, consisting of development from the existing adit level at a vertical depth of three hundred and thirty-three feet below the elevation of the collar of the McLeod shafts, as well as the starting of a new intermediate adit level two hundred and eleven feet below the collar. Both adit levels were actively advanced throughout the entire year. On the second or new adit level a total of 1,955.5 feet of development advance was completed, and on the third level a total of 2,161.0 feet was completed. The work was distributed as follows.

Level	Drifting Advance	Drifting Slash	Crosscutting Advance	Crosscutting Slash	Raising Advance	Raising Slash	Total
2nd	1,402.0	80.0	332.5	-----	107.5	33.5	1,955.5
3rd	360.0	33.0	1,689.5	49.5	29.0	(sump)	2,161.0
	1,762.0	113.0	2,022.0	49.5	136.5	33.5	4,116.5

This development program outlined one ore shoot on the second level and indicated the downward extension of the same conditions on the third level. Plans for 1952 were for the continuation of the underground development on both levels, in the favourable ore areas, towards eventual production.

Mayo Mines, Limited

This company employed up to seven men in mining operations on the "Tundra" claim on Sourdough Hill. It shipped eighty tons of high grade ore recovered from the "Ram" claim on Sourdough Hill during 1950, realizing $31,465.69. An adit was opened on the "Tundra" claim and driven three hundred feet. At this point a crosscut was started to intersect a parallel vein estimated to be fifty feet distant. The company also put down three shafts on the property.

Mount Keno Mines, Limited

Mount Keno Mines, Limited employed an average of twelve men. With the exception of a cursory examination on surface, exploration was confined to driving an exploratory adit. A total underground advance of five hundred and eighty-nine feet was made. A body of high grade ore was encountered during exploratory drifting and twenty-six tons of good shipping ore were sacked. Plans for 1952 included continuing exploration from the adit, driving a second adit at a lower elevation, and possibly driving a third adit at a higher elevation, and surface exploration.

No Cash Lead and Silver Mines, Limited

A report written by the Mayo Mining Recorder in 1951 described the affairs of this company in this way. "This company might be considering changing its name to No Cash No Lead No Silver No Mine, Limited. A young engineer was sent in to do some preliminary mapping. He arrived on the property just a month after the claims owned by No Cash had expired. Not knowing this, he very carefully began a survey of the claims. The survey revealed that instead of having a group of full claims, the company had a group of fractions. About this time the lad discovered that the claims had lapsed. Fortunately they had not been relocated and he was able to stake the ground for his company. He was able to cover the name ground with one less claim than the company had originally owned. So the net result of the 1951 operations of No Cash was to end up with one claim less than it had to begin with. This company probably has no future."

United Keno Hill Mines, Limited

United Keno Hill Mines, Limited operated the only mine in actual production in the District. During the year mining was confined in general to ore already developed on the "Hector" claim, with minor amounts of mill feed being secured from development work proceeding on the "Calumet" and "No Cash" mines. A major development effort of the year was sinking of a three compartment production type internal winze to a depth of nine hundred feet from the four hundred foot level of the "Hector" mine, with four new levels established at intervals of one hundred and twenty-five feet. Crosscuts from the upper two of these levels intersected the No. 3 vein, and showed typical mineralization and values. Other development work at the "Hector" comprised some two thousand feet of drifting of which approximately twenty-five percent was in ore. At the "Calumet" mine some five hundred feet of drifting was carried out, mostly of an exploratory nature and very little new ore was developed. At the "No Cash" the chief work consisted of driving an adit through to surface and re-timbering the old level in order to handle full sized mining equipment. At the "Bermingham" the adit level, commonly known as the two hundred foot level, was driven for a further seven hundred feet, all of an exploratory nature, and a raise was driven through to connect with the old Treadwell Yukon workings. The property was subsequently shut down to permit intensive work to be carried out on the "Onek" claims. At the "Onek", a crosscut was driven for 1,600 feet and intersected a strong vein, which had not yet been identified as the same vein encountered in the "Lone Star" and "Fisher" workings. Some three hundred feet of drifting was carried out on this vein in material which was largely sphalerite, but showing minor amounts of silver and lead which were increasing markedly as work progressed. Eighty to ninety tons of ore per day were delivered to the Elsa mill as a result of the development work at the "Onek".

Apart from mining, the chief progress during the year was the erection a a 350-ton cyanide mill which went into operation on December 8th. The purpose of this mill was to treat tailings from the flotation plant at Elsa and eventually to re-treat the tailings which were stockpiled on the hillside during the previous few years operation of the property. At the end of the year the cyanide plant had not begun normal operation, but results were gratifying, and it seemed probable that the operation would result in a marked increase of production. In the power plant, diesel engines to a total horse power of 1,225 were installed. The extra power was required to operate the cyanide plant, and to allow increased activity at the "Hector" mine, including a main hoist in the new winze.

During the year the Transport Division was fully established, and all concentrates and freight were handled on the Company's fleet of thirty-one trucks, which were based in Whitehorse where garage and overhaul facilities were maintained.

During the year, 94,845.7 tons of ore were mined, from which 8,703.61 tons of lead-silver concentrate, and 6,011.10 tons of zinc concentrate were produced. Net production for the year was 3,579,188.00 ounces of silver, 13,024,537 pounds of lead, 7,617,270 pounds of zinc, and 100,561 pounds of cadmium. Shipments to the smelter totalled 9,470.71 tons of lead concentrate, 6,027.11 tons of zinc concentrate, and 35.45 tons of high-grade ore.

The company employed 360 men, as of December 31, 1951.

Plans for 1952 were not definite, but they concentrated on the Hector property and included opening up the four new levels and establishing production facilities there, and further exploration and development of the older levels. An intensive campaign of development was planned for the "Calumet" mine. Development at the "Onek" on an increased scale was planned as more development headings became available, and more crews could be used. At "No Cash" mine work was to be confined to further lateral development and raising in the ore bodies already established, with a view to justifying the sinking of a main production shaft. At "Elsa" mine drifting and diamond drilling were planned. Reopening of the "Sadie" and "Ladue" mines on Keno Hill was planned for the summer, and preliminary exploration of some of the company's other holdings, including the "Devon" and "Caribou" claims was also planned.

There was every indication that the operations of United Keno Hill Mines, Limited would assume proportions which would bring the company's operations into a prominent position in Canadian mineral production within 3 years. The development of the zinc ore body on the "Upton" and neighboring claims had reached a degree where a concentrator was indicated. There were four hundred thousand tons of ore in sight, and it was expected that a continuance of the program of exploration and development would raise this figure to at least one million tons. Development production ore was being trucked to the concentrator at Elsa at a cost of approximately $3.50 a ton. The construction of a mill in the vicinity of the property would save in transportation, and the saving effected for one million tons would more than cover the cost of construction. Although plans of this company were not yet definite, it was anticipated that the mill would commence at five hundred tons.

Yukeno Mines, Limited

During 1951 the operations of Yukeno Mines, Limited (formerly Consolidated Yukeno Mines, Limited) consisted of geological mapping and surveying of the twelve groups of claims held in the District. A mining plant was purchased based on a recommendation to sink a shaft and carry on underground work on the Formo group near Christal Creek. As a result of late delivery of some of this equipment underground work was started late in the autumn by means of an adit, instead of a 150-foot three compartment shaft as originally planned. At the year's end the adit had advanced seventy-six feet from the portal at an elevation of one hundred and fifty feet below the collar of the old Formo shaft. The number of men employed was fifteen. Plans for 1952 included continued geological mapping, completion of claim surveys, continued underground development at the Formo via adit, and surface or undergound exploration on some other properties.

Assay Office

The assay office was maintained at Keno by the territorial government. There were 1,502 samples received from all parts of the territory, although almost 85% came from Keno, Galena, and Sourdough Hills. Companies submitted 78% of the samples. There were 1823 assays or quantitative analyses made. The analyses made were gold and silver, 1,502; lead, 247; zinc, 59; copper, 8; and antimony, 7.

WHITEHORSE DISTRICT

Mineral exploration activity in the Whitehorse District increased during 1951. Routine representation work was carried out on many of the existing claims in the district, and many new claims were staked. Little development work preparatory to mining operations was done, however.

Hudson Bay Exploration and Development Company, Limited

Hudson Bay Exploration and Development Company, Limited continued their work in the Fuller Lake area. The seven claims staked in 1950 were examined, and some drilling was done. The company also staked a group of 56 claims on a new discovery which was believed to be a silver-lead-zinc occurrence at Mile 238 on the Canol Road. It was understood that an intensive drilling program would be carried out in 1952.

Noranda Mines, Limited

Noranda Mines, Limited completed a work program on the Whitehorse Copper Belt consisting of geophysical examination followed by drilling of anomalies and detailed study of the geology. The company abandoned all claims north of the Arctic Chief Crown Grant. They retained a group of 4 "Whitehorse" claims, and the Bell Fraction adjoining the Golden Gate, Whitehorse, Arctic Chief and Verona Crown Grants. They also retained a group of 10 "Whitehorse" Claims located two miles south and another group of 5 claims just west of Dugdale Station. No work was carried out on these claims in 1950 or 1951, but it was reported that work was planned for 1952.

Other Lode Operations

The SS and Extension groups adjoined the Noranda property, and extended easterly in the Dugdale Lake area. These groups, totalling 31 claims, were owned by James A. Smith and associates. Veins were exposed from which assays of gold, 0.04 oz; silver, 8.20 oz; copper, 10%; and traces of lead, manganese and scheelite were obtained. Only surface work was done.

The Rich group of 8 claims tied in to the north side of the Pueblo property and extended northerly to adjoin the Max group of 6 claims staked over the old Rabbit's Foot Crown Grant (reverted) and adjoining the Ruby and Anaconda Crown Grants. F.J. Maximick staked the Max group near the Alaska Highway at Mile 920. A certain amount of work was carried out on the Max claims, including cleaning out the old Anaconda tunnel and several shafts.

The C and J group and the Pat group were adjacent to each other, and 2½ miles north of Mile 888.5 Alaska Highway on Pat Mountain. Eight of the claims were staked by A.J. Dickson and two by G. Dawson. The claims covered an asbestos discovery in a serpentine deposit, but the grade was not known.

The Mac group of 8 claims owned by James A. Cox and the adjoining Carbon group of 22 claims owned by A.C. Brett covered a high grade deposit of stibnite discovered in the early part of the century on the east slope of Carbon Hill, in the Wheaton River area. During 1951, an old tunnel driven westerly into the hill was cleared out to facilitate further examination to determine the width of the deposit at depth. Considerable work was also carried out on the road to the showing. Assays from the Mac group ran as high as 47.67% antimony, with only 0.04% arsenic. Low grade ore ran 11.18% antimony, again with 0.04% arsenic. The haul to the railway at Robinson Station was approximately 20 miles. Further work was planned for 1952.

The Empire group of 14 claims staked by Cox, McAlister and Bensen were located on the northwesterly slope of Carbon Hill where surface showings indicated a continuation of the deposit found on the Mac and Carbon Groups. Assays of samples from the surface of the hill ran as high as 49.20% antimony, and 0.07% arsenic. Samples from the west side of the hill ran 12.59% antimony, and carried 0.11% arsenic. These showings parallel the high grade deposits found on the Empire and Porter group of Crown Granted Mineral Claims on the northwest side of Carbon Hill. Walter McAlister also staked the Chief group of 4 claims on the Chieftain Hill side of the Wheaton River where another deposit of antimony-silver ore, the Chieftain Gulch deposit discovered around 1906, occurs. Surface work only was carried out on the Empire and Chief groups.

The Mountain Sheep group of 4 claims was staked by Johnnie Johns on Mount Anderson in the vicinity of the Tally-Ho group of Crown Granted Claims where gold-silver deposits were worked in the early days. No information was available as to work carried out on the Mountain Sheep group in 1951.

The Nesjack and Winnie groups of 6 claims covered the old Union Mines property on Idaho Hill in the Wheaton River area, just west of Annie Lake. An adit on the east face of the hill gave entrance to underground workings which were explored. Work commenced in the fall, and progressed slowly. Yukon Mines, Limited maintained the camp at the property.

The Betsy group of 6 claims was staked by Chas. E. Hankins on a silver-lead vein structure located on the north slope of Mount Folle. No work was reported.

Seventy-seven claims were staked in the Teslin area, approximately 4 miles north of Mile 853 Alaska Highway by Billy Smith and associates. The claims covered a serpentine deposit from which samples of ¼ inch fibre chrysolite asbestos were produced. One sample of actinolite was also produced from the vicinity, as was a sample of 3 inch fibre tremolite found in fairly large quantities and appearing quite pure. The latter deposit was not staked.

The adjacent Callison and Marg groups of 9 claims were staked between Logjam Creek and Smart River, just north of the B.C. boundary, by Messrs. Callison and Frederickson. There were no reports of work on the claims.

The Tungsten, S. and T. groups of 8 claims each were staked 5 miles north of Mile 701.3 on the Alaska Highway. These claims, which covered an outcropping of high grade wolframite ore discovered in 1943, were taken over by Yukon Tungsten Corporation of Whitehorse. Development work was undertaken by Chillicopper Corporation Limited, which drove an adit some 120 feet to intersect the main showing. Cross cuts were planned to intersect other veins in a horizontal length of 300 to 350 feet. High grade ore on the surface ran 42.10% WO_3 and averaged 8.45% over a 100 ft. length. The company expected to go into production in 1952. Additional groups of claims were located adjacent to the Yukon Tungsten group. Whitehorse Tungsten Company held two groups of 8 each, the Acme and Ajax. There were also 26 additional claims in 3 groups.

Several groups of claims were staked in the vicinity of Mile 701 of the Alaska Highway. A group of 4 claims known as the Hardtack group was staked by Maurice Grenier 12 miles north of Mile 701. The claims were believed to cover a silver-lead occurrence. The group of 4 E.O.S. claims were staked by P.M. McLanders 5 miles south of Mile 701. The 4 Ops claims, staked by H. Woods, were 4.5 miles south of Mile 701. Ten claims were staked by J.R. Shiell and W.H. Simpson immediately north of Mile 703. No reports of work done on the properties were available.

The group of 46 South Nahanni claims held by Noranda Mines in the Quartz Lake area of the Hyland Plateau were drilled and explored further by American Smelting and Refining Co. with encouraging results. In one drill hole over 60 feet of good ore was cut.

One claim was staked approximately five miles east of the forks of the Liard and Inge Rivers by E. Hagen. The claim was staked on a silver-lead occurrence about which no information was available.

Representation work was done on a number of claim groups in the Carmacks area. The claim groups included the 12 Freda and Pauline claims held by G. Fairclough, the Divide group on the Klaza river held by K. Springer and G. Dixon, the Web group on Nansen Creek held by G. Dixon, and the Revenue, Shearzone, and Vindicator groups in the Big Creek area held by

P.F. Guder.

In the Kluane Lake area, the Molly group of 8 claims was staked by J. Meloy at the head of Raft Creek, a tributary of the east side of Talbot Arm of Kluane Lake. The claims covered a molybdenite occurrence. M. DeMers staked a group of 8 claims on a similar deposit immediately to the southeast of the Molly group.

Routine development work was carried out by R.A. George on his group of four claims at the south end of Aishihik Lake. No details as to the nature of the showings were available. During the years 1947 to 1951, approximately 100 claims were recorded south and southeast of this group by itinerant amateurs who failed to carry out any intensive prospecting. Some picked samples containing a large amount of pyrite assayed as high as 1.2 oz. in gold. Other samples appeared to contain a large amount of molybdenite. No further assays were known to have been made.

The group of 21 claims at Mile 1212 Alaska Highway covering a deposit of manganese ore was investigated. An assay of 52.8% MnO_2 was obtained from a 400 pound sample shipped to Consolidated Mining and Smelting. The assay showed 46.1% Mn, 16.7% SiO_2 and under 1% each of iron, cobalt, nickel, arsenic, antimony, germanium and tin. The mineralization, on the boundary of the Alaska Highway right of way, was approximately 20 inches wide at the surface, and 36 inches at six feet in depth. It was exposed for some 20 feet and was traced for 90-100 feet to the east where it appeared to be cut off by a diorite dike. To the west, it trended into an area of muskeg for an unknown distance. The dip was away from the highway. Claims were also staked at Mile 1158 Alaska Highway and half a mile west of Boulder Creek, a tributary of White River. There was no information available as to the nature of the deposits covered.

Routine exploration work was carried out on the group of Little Gold and Horseshoe claims held by F.A. Dupont between Selwyn and Selkirk Creeks, tributaries of the Left limit of Hayes Creek in the Nisling River area.

The Yukon Coal Company continued to operate the Tantalus Mine at Carmacks in 1951. Production was increased to approximately 5,000 tons of coal.

PLACER MINING

The amount of placer gold mined during the year, on which royalty export tax was paid was approximately 78,006 fine ounces, or just 66% of the production one year earlier. There were 76,833 ounces of gold recovered in the Dawson District, and 1,173 ounces recovered in the Whitehorse District.

Yukon Consolidated Gold Corporation, Limited reported that the general unfavorable conditions under which gold mining was being conducted became more acute during the 1951 season, and were reflected in increased operating cost and in reduced profits. Benefits derived from the Gold Mining Assistance Act were considered to compensate in only a small way for the continued rise in prices and wages, although for the company benefits under the act in 1951 were approximately $125,000.00. Wage rates in 1951 were 133 of their 1940 levels, and consumed nearly 60 of the company's production. The cost of supplies was also increasing. The company forecast a gloomy future unless gold prices increased substantially.

DAWSON DISTRICT

The winter of 1950-51 was an unusually severe one. Cold weather came early in the fall, and lasted until mid-December, when there was a temporary respite, continuing until January 13th. Cold weather then lasted until March 17th, when there was a definite break. The minimum temperatures during that period continuously ranged from -40 to -60 degrees Fahrenheit.

The snowfall was below normal, and in the spring provided little water run-off. The ice moved from the Klondike River at Ogilvie Bridge on May 3rd, and from the Yukon River at Dawson on May 8th. The first boat arrived in Dawson from Whitehorse on May 31st.

The summer of 1951 was very dry and warm. Practically no rain fell, except for a few showers in May, until August 17th. During the drought many forest fires developed, which spread particularly in the vicinity of Granville and Dominion Creeks, and also on Flat Creek. These fires caused a great deal of damage to the tree growth and wild life, besides destroying the natural water storage of those districts.

The first fall frost occurred on the night of August 26th. The lack of rainfall caused the Yukon and Klondike Rivers to drop below record low stages, and it was necessary for the White Pass Company to remove its larger boats from service. The fall weather was relatively mild until the middle of November, when the temperature dropped to -30 degrees. Moderately cold weather continued until the end of the year.

Yukon Consolidated Gold Corporation, Limited

Property

The company maintained in good standing titles to all property deemed necessary to the pursuance of its mining operations, including dredging leases, hydraulic leases, placer mining claims, and water rights.

The total of claims owned or controlled as of December 31st, 1951 was 1,109. In addition, there were three hydraulic leases, Nos. 1, 5 and 18. Two prospect leases on Quartz and Little Blanche Creeks were abandoned. Six prospect leases were staked on the Sixtymile and Matson Creeks.

Power Generation and Transmission

The company's hydro-electric plant, which was located on the North Fork of the Klondike River, operated continuously during the year, and generated a total of 32,433,500 kilowatt-hours of power. Of this amount, 21,403,100 kilowatt-hours, or 66.0% of the total generated, were used by the company in its mining operations, 6,949,100 kilowatt-hours, or 21.4%, were sold to the Dawson Electric Light and Power Company, Limited, for supplying light and power to the City of Dawson, power plant services used 1,778,600 kilowatt-hours, or 5.5% of the total generated and transmission line and transformer losses amounted to 2,302,700 kilowatt-hours, or 7.1%. The total cost of generation and transmission amounted to $108,566.69, or .383¢ per kilowatt-hour sold and distributed.

Hydraulic Stripping

Full scale hydraulic stripping of muck overburden was carried on at operations Nos. 6, 8, 9, 10 and 11. These operations were handicapped throughout the entire season by a shortage of water, and it was necessary to shut down the No. 6 operation on June 30th for that reason. The warm weather provided an abundance of thawed muck, so a relatively high muck removal duty was obtained for the small amount of water used.

Operations Nos. 6, 8 and 9 received water from the Sulphur-Australia Ditch, while Nos. 10 and 11 depended on their respective local streams for the source of their supply. The Sulphur-Australia Ditch delivered a total of 104,300 miner's inches of water, or approximately 51% of its actual capacity.

The results of the stripping at the various plants were as follows.

Area No.	Location	Operating Dates		Water Season Days	Water Used M.I.D.	Removed	Duty
		Started	Ended				
6	Granville	May 20	June 30	40	9,817	142,200	14.49
8	Middle Sulphur	May 15	Sept. 28	111	34,285	388,255	11.32
9	Upper Sulphur	May 14	Sept. 25	134	31,459	656,719	20.88
10	Middle Dominion	May 17	Sept. 2	109	18,515	164,939	8.91
11	Hunker	May 14	Sept. 28	130	24,961	384,007	15.38
				105	119,037	1,736,120	14.58

A total of $201,632.75 was expended on the stripping operations, which gave a cost of 11.61¢ per cubic yard of muck removed.

Cold Water Thawing

Artificial thawing operations, using water at natural temperatures, were conducted at five plants, Nos. 6, 8, 9, 10 and 11, located at Granville, Middle Sulphur, Upper Sulphur, Middle Dominion and Hunker, respectively. The hot weather during the summer provided unusually high water temperatures, which definitely assisted in the thawing, and which resulted in higher thawing duties than were generally obtained. A shortage of water was a definite handicap at some of the plants.

A total of $232,678.51 was expended on thawing operations, with an average cost of 4.70¢ per cubic yard thawed. The detailed data on the operations are as follows.

Area No.	Location	Operating Dates		Water Season Days	Water Used M.I.D.	Cu. Yds. Thawed	Duty
		Started	Ended				
6	Granville	May 10	Sept. 24	137	127,536	1,127,775	8.84
8	Middle Sulphur	May 11	Sept. 24	136	138,072	881,969	6.39
9	Upper Sulphur	May 10	Sept. 24	137	100,803	737,509	7.32
10	Middle Dominion	May 11	Sept. 24	136	160,957	1,211,630	7.53
11	Hunker	May 14	Sept. 22	130	133,577	987,718	7.39
				135	660,945	4,946,601	7.48

Dredging

The company operated seven dredges during the season. The total number of dredge days amounted to 1,322, or an average of 189 days for each dredge, which was about the same as in 1950, when eight dredges operated for 1,488 days, at an average of 186 each. The dredges were powered by electricity produced at the company's hydro-electric plant on the Klondike River.

The operating season extended from April 29th, when Dredge No. 10, on Dominion, started, to November 19th, when Dredge No. 3 closed down. Dredge No. 4 was late in starting, commencing on May 13th, and due to unusually bad conditions, closed down on October 14th. A summary of the 1951 dredging operations is below.

Dredge No.	Location	Bucket Size Cu. Ft.	Operating Dates		No. Days Operations	Cu. Yds. Dredged
			Started	Ended		
3	Klondike River	16	May 1	Nov. 19	202	1,708,769
4	Bonanza	16	May 13	Oct. 14	155	552,687
6	Lower Sulphur & Dominion	7	May 1	Oct. 15	167	708,199
8	Middle Sulphur	7	May 1	Nov. 18	201	738,509
9	Upper Sulphur	5 3/4	May 3	Nov. 15	196	550,873
10	Middle Dominion	7	Apr. 29	Nov. 15	200	806,054
11	Hunker	7	May 1	Nov. 18	201	813,331
						5,878,422

Production

The total production for the year from the dredging operations was 52,013.187 fine ounces of gold and 11,505.01 ounces of silver, for which the company received a total of $1,933,667.85, representing an average of 32.87¢ per cubic yard. Had it not been that Dredge No. 4 on Bonanza Creek (the company's largest dredge) was hampered by frozen ground, it was estimated that the production for 1951 would have exceeded that of 1950, which was $2,320,150.00.

Shops and Transportation

The machine shop, electrical repair shop and automotive repair garage, all located at Bear Creek, were operated in the same manner as in preceding years. The truck freighting was done under contract with McCormick Transportation Company, and the transporting of men and parcels was done under contract with Cook's Taxi Service.

Prospect Drilling

A small amount of prospect drilling was done during 1951. It was done on the bench along the right limit of Quartz Creek, where leases had been staked in 1950. The results indicated that the ground was below economic grade. The drilling started May 16th and was concluded June 26th.

Reserves

Stripped reserves were increased marginally over 1950 reserves to 12,734,065 cubic yards. Thawed reserves were increased 18% over 1950 reserves to 9,623,673 cubic yards.

Employment

As in previous years, arrangements were made with the National Employment Service to supply all labour requirements. They were, however, unable to supply the full quota of men requested, and a shortage of labour developed early in the season which increased to where the shortage exceeded 100 men on September 1st.

The quality of labour was about the same as in previous years. Skilled labour, such as machinists, carpenters, electricians and mechanics, continued to be difficult to get. The average number of men employed during 1951, by months, was as follows.

January	62	July	343
February	75	August	318
March	106	September	284
April	335	October	254
May	438	November	107
June	385	December	28

The peak employment was from May 19th to May 26th, at which time 441 men were employed. The total man shifts worked during the year was 80,801. The total cash expenditure for wages and salaries was $1,001,980.99.

Miscellaneous Expenditures

Equipment and supplies not purchased locally amounted to $311,445.63, on which freight charges of $53,232.33 were paid. Local purchases amounted to $263,036.44.

Yukon Placer Mining Company

Yukon Placer Mining Company operated at two locations on Big Gold Creek during 1951. One operation consisted of a Washington Iron Works diesel-electric dredge with 3½ cubic yard buckets. Preparatory work was begun April 20th, and the dredge began mining June 16th. It continued operation until October 15th. The other operation consisted of open cut mining carried out with two D-8 Caterpillar bulldozer tractors, one Bucyrus 50-B diesel-powered dragline, and ground sluicing. Work was done between June 16th and October 4th. The average number of men employed for the season was 23. Gold production was valued at $250,347.65, and consisted of approximately 7,150 fine ounces of gold. Very deep surface, or seasonal frost and a shortage of water hampered operations in 1951.

Clear Creek Placer Mines, Limited

Clear Creek Placer Mines, Limited mined using a dredge on Clear Creek during 1951, with operations carried out between May 30th and October 9. Operations were curtailed by a broken block on the diesel engine which powered the dredge. This resulted in about one-half the normal season's production. Production was valued at $85,516.89, and consisted of 2,293.48 fine ounces of gold. Seventeen men were employed.

Yukon Gold Placers, Limited

Yukon Gold Placers, Limited continued mining at Henderson and Thistle Creeks during 1951. One dredge operated on Henderson Creek between June 12 and October 10th. The gold produced was valued at $146,741.00, and consisted of 3,939.44 fine ounces of gold. An extreme water shortage existed at the property until mid August. The water shortage reduced the production from the expected $200,000.00, and forced suspension of all ground preparation work. There were 22 employees at the Henderson Creek workings.

The company also employed 22 men at its Thistle Creek property. The diesel-electric pontoon dredge operated from June 1st to October 14, although it was shut down for 37 days in mid-season because deep penetration of seasonal frost forced re-thawing of previously thawed ground ahead of the dredge. Operations were also hampered by the water shortages of 1951. Production was valued at $41,175.14, representing 1,111.04 fine ounces of gold.

Other Placer Operations

Miller Creek Placers began mining on May 1st, and finished during the first week of September. They operated 3 bulldozers, and did open-cut or ground-sluicing work on Sixtymile Creek near the mouth of Miller Creek. They employed 12 men. As was usual in the Sixtymile area, they had an abundance of water for their operations. Gold production for the 1951 season was 5,578.34 fine ounces. The ground was worked out during 1951.

L.C. Bradbury and J.C. Cooper mined on Little Gold Creek, using two D-6 Caterpillar bulldozers. They operated between April 17th and October 31st, and although most of the work was done on a prospecting basis, enough gold was recovered to pay for operating expenses. Gold produced in one month of ground-sluicing totalled 549.21 ounces.

Bedrock Mining Company, Limited, an associate of Yukon Placer Mining Company, became defunct during 1951.

Messrs. H.C. and D.F. Boutillier did hydraulic mining between April 1st and October 1st on claims on Adams Gulch, a tributary of Bonanza Creek. They removed between 25,000 and 30,000 cubic yards of material to a depth of 150 feet, and recovered 155.69 fine ounces of gold. Their water supply for the early part of the season was good, but from June to the end of operations was very poor.

R.E. Troberg used bulldozer and hydraulic methods to mine on his Bonanza Creek property. He mined from May 1st to September 30th in 1951 with one or two employees. Gold recovery for the season was 179.12 fine ounces. An extreme shortage of water was experienced at this operation.

Mr. B. Bratsberg continued mining on Gold Bottom Creek, using a bulldozer and sluice box. He and one employee mined from May 15th to October 1st.

Mr. J. Bremner, his son, and one employee mined on Last Chance Creek using hydraulic equipment. Mining operations began April 16th, and ended October 9th. Production for the season was 90.24 fine ounces of gold. A shortage of water was experienced through most of the season.

Messrs. M.D. and L.G. Cole mined using two bulldozers and hydraulic mining methods on Bonanza, All Gold, and Dominion Creeks. Their 1951 operations, carried out between April 1st and October 31st, were carried out mainly on their Dominion Creek property. They employed six men, and produced 561.38 fine ounces of gold. They were also hampered most of the season by a shortage of water.

Messrs. J.R. Colbourne and E. Schink and three employees continued mining on a hillside property on Hunker and Hester Creeks. They worked using one bulldozer and hydraulic methods from April 15th to October 15th, and recovered 60 ounces of gold. Their production was small partly due to the amount of preparatory work which had to be done, and partly due to an extreme water shortage.

Adolphe and Alcide Coulombe mined on the upper end of Ballarat Creek using open-cut methods, and one bulldozer. They operated from June 1st to October 1st, and produced 191.50 fine ounces of gold.

Ballarat Mines, Limited was formed in 1951 by the same principals who formed Yukon Placer Mining Company. The company operated on the lower end of Ballarat Creek, the first tributary on right limit of the Yukon River above the mouth of Coffee Creek. Five men were employed operating two D-8 caterpillar bulldozers and doing ground-sluicing. Operations commenced April 20th and ended September 30th. The value of gold produced was $61,760.00 representing approximately 1,750 fine ounces of gold. Deep seasonal frost and dry weather cut down production. The shortage of water during the latter part of August and September allowed only 3 to 5 hours sluicing out of 24 hours.

Reno Gold Mines, Limited continued to hold their 28 claims on Canadian and Casino Creeks, but did not mine during 1951.

Thure Gustafson, and three employees used bulldozers and ground-sluicing methods to mine on his Moose Creek property. They worked from April 15th until October 15th. Approximately production for the season was valued at $6,000.00, representing 170 ounces of gold. Although water was plentiful at Moose Creek, the operations was not economic.

MAYO DISTRICT

Placer claims were maintained in good standing, but no mining was undertaken during 1951. W. McComb continued with development work on his Ledge Creek property. Fred Taylor gathered placer scheelite which had accumulated at his Dublin Gulch property as a result of mining operations in previous years, and shipped thirty sacks, valued at approximately $15,000.00.

WHITEHORSE DISTRICT

There were 10 new placer claims and 69 renewals issued during 1951. There were also 17 new prospecting leases covering 44 miles issued, and 2 leases covering 4 miles were renewed.

Gold production for the year was 1,173.43 ounces, an increase from the 966.30 ounces produced in 1950. Gold production by location was as follows.

Bullion Creek	44.60 oz.
Burwash Creek	1,028.80 oz.
Cottoneva Creek	57.525 oz.
Sheep Creek	26.50 oz.
Shorty Creek	6.05 oz.
Miscellaneous	9.95 oz.
Total	1,173.425 oz.

Placer mining and exploration activity were carried out almost exclusively in the Kluane Lake area during 1951. In contrast to the Dawson District, where drought conditions prevailed, heavy cloud-bursts in the Kluane Lake area interfered with mining operations.

Burwash Mining Company, Limited continued their road building program through the canyon in conjunction with mining operations on Burwash Creek, and moved their camp to a new site upstream where the valley began to widen. Fortunately the site was on relatively high ground, for a washout occurred, and everything on the creek level was either carried down stream or covered with heavy gravel. Most of the road was destroyed in whole or part and in places half the width of the surface was washed away revealing sheer walls of gravel foundation up to ten feet in thickness. As a precautionary measure, a bulldozer had been parked on the camp level and when the flood subsided they were able to recover their machinery, retrieve adequate serviceable equipment and reclaim the road sufficiently to permit the resumption of operations. The disaster proved costly, but in spite of the delay they recovered 1,028.80 ounces of gold during the season. The company operated with two shifts, employing six men, and utilizing a bulldozer, power shovel, and washing plant. They planned to continue operations in 1952.

Harry Fromme and associates commenced operations on Gladstone Creek in 1951 after transporting their equipment and supplies across the ice of Kluane Lake during the winter. They had barely started when a cloud-burst crippled their whole operation by washing immense quantities of gravel down the valley and completely covering their equipment. The operations were abandoned at this point.

A party of three United States students operated on Shorty Creek for several weeks, on claims above Discovery. They abandoned the work after recovering only 6.05 ounces of gold.

Leases held by Mr. and Mrs. J.F. Tassie on Wolverine Creek were abandoned after it was found that a certain type of suction equipment proved inadequate for placer mining when coarse gravel was encountered.

No information was available concerning operations on newly acquired leases and claims on Ruby, Twelfth of July, Cyr, Sugden, Reed, Sheep, Bullion, Goat, Sayyea and Tungstate Creeks. Property held in the Livingstone Creek section was inactive, with the production from Cottoneva Creek having been recovered as a result of work done in 1950 by Louis Engle.

CHAPTER 13

MINERAL INDUSTRY OF YUKON, 1952

INTRODUCTION

Information on the mineral industry in Yukon in 1952 was compiled from reports by W.G. Brown, Commissioner, G.R. McIntyre, Mayo Mining Recorder, and W.M. Emery, Whitehorse Mining Recorder. Additional information came from correspondence of E.N. Patty of Yukon Gold Placers Ltd., and of Clear Creek Placers Ltd., and of A.M. Nordale, resident manager of Yukon Consolidated Gold Corporation, and from publications of the Emergency Gold Mining Assistance Act.

MINERAL PRODUCTION

Mineral production from lode and placer deposits during the year ending December 31, 1952 was valued as follows.

Gold	$2,690,846.00
Silver	$3,364,646.00
Lead	$2,973,883.00
Zinc	$1,932,853.00
Cadmium	$ 284,878.00
Coal	$ 139,345.00
Total	$11,386,451.00

LODE MINING

Lode exploration activity changed focus during 1952. Interest in the Mayo District waned, after exploration and development efforts carried out over several years failed to identify new, large, mineable reserves of ore. Much attention was directed to the Shakwak Valley in the Whitehorse District, after a party of three prospectors located massive, nickeliferous pyrrhotite on June 13th.

In the Dawson District, there were 65 new claims recorded, and 32 claims were renewed. There were 210 new claims recorded in the Mayo District, and 1,414 claims were renewed. There were 1,644 claims, and 164 quartz leases in good standing in the district. In the Whitehorse District, 1,354 new claims were staked and 689 claims were renewed during the year, a significant increase from 467 claims and 249 claims respectively during the previous year.

Production from lode operations in the Elsa-Keno Hill area in 1952 totalled at least 24,160.8 tons of concentrate containing 19,645,618 pounds of lead, 4,769,574 ounces of silver, 13,579,219 pounds of zinc, and 184,984 pounds of cadmium.

Yukon Coal Company produced approximately 9,000 tons of coal at its Tantalus Mine near Carmacks.

DAWSON DISTRICT

During the year, there was no lode mining done in the Dawson District. Routine assessment work, and limited prospecting were done.

A group of 38 claims was staked in 1952 in the vicinity of placer claims No. 31 and 32 above the mouth of Gold Bottom Creek. Apparently an early day prospector sank a 70-ft. shaft at this point, tunneled some 25 feet from the shaft, and brought up a small dump of bornite ore. The ore contained 18% copper, 20% sulphur, and approximately 18 oz. of silver to the ton. The Yukon Consolidated Gold Corporation, Limited, under agreement with the claim owners in the immediate vicinity of the find, carried out some exploratory work in 1952 in the shaft, with encouraging results. They intended to do further work on the property in 1953.

Messrs. J. Meloy and A. Brown continued to hold their block of 16 claims on the upper end of Casino Creek. They reported showings of silver, lead and tungsten, but only took out samples and did routine assessment work.

Of the group of 19 silver-lead-zinc claims staked in 1951 in the Little Twelvemile River area by the Klondike Exploration Syndicate, only 4 were kept in good standing. Only assessment work was done on the claims.

Five claims covering asbestos showings found many years earlier were kept in good standing. Three were at "Asbestos Bluff" on the Klondike River, and 2 were on the hillside east of Dawson. The quality of asbestos samples produced from the claims to 1952 was not good enough to warrant mining them.

A group of 16 claims on the right limit of the Yukon River approximately 25 miles below Dawson covered a silver occurrence. The occurrence was an old find, which had been staked many times in the past. The mineralization consisted of argentite, and the ore contained 75 ounces of silver per ton. It was found, however, in float, and no veins had yet been uncovered.

Messrs. A. Hoidahl, J. Crowdy, and K. Gardlund staked 20 claims at the head of Annett and Mason Creeks, tributaries of the Blow River, over a tungsten-molybdenum-gold occurrence discovered in 1951.

The remaining claims in the Dawson District covered widely scattered prospects. Only assessment work was done on them.

MAYO DISTRICT

The "boom" in mineral exploration in the Mayo area was apparently over in 1952. The smaller companies did little work or were not active at all. Apart from United Keno Hill Mines Limited, there were no mines producing in 1952. Bellekeno Mines Limited and Mackeno Mines Limited were expected to be in production in 1953, utilizing a custom mill constructed in 1952 near Christal Creek.

Most of the 164 claims staked on Stand-to Mountain in 1950 lapsed. Only representation work was done on the claims in good standing. Most of the claims staked in 1951 in the Lime Creek-Lynx Dome area were allowed to lapse. Only representation work was done on claims in good standing in the Haggart Creek, Highet Creek, and Rambler Hill areas. No Cash Lead and Silver Mines, Limited allowed all of its claims to lapse in 1952.

Ankeno Mines, Limited

Ankeno Mines, Limited completed their diamond drill hole cross section of the Star, Petain and Petain No. 2 claims, which were adjacent to United Keno Hill Mines, Limited's Onek group. The survey, which was begun in 1951, consisted of 8 holes totalling 1,005.0 feet.

In September an adit was collared on the 3,800 level. Underground work on this level consisted of 1,018.0 feet of cross cutting, and 334.5 feet of drifting. This work was on the "Iron Clad" and "Star" claims in the vicinity of the Hogan vein. In addition a crosscut was being driven toward the Petain No. 2 claim. Several favourable vein structures were located by the underground work.

Bellekeno Mines, Limited

Underground work proceeded on both the 100 foot and the 200 foot adit levels of Bellekeno Mines, Limited during 1952. The workings, on the Whipsaw, Extension, Apex, and Eureka claims, consisted of 1,750.0 feet of drifting, 102.0 feet of crosscutting, and 451.0 feet of raising.

Drifting on the 200 foot adit level disclosed two ore shoots. The first of these shoots was 105.0 feet long and averaged 52.5 ounces of silver per ton across 4.5 feet in width. The second shoot was 170.0 feet long, and averaged 122.0 ounces of silver per ton, and 13.00% lead across 4.5 feet. Toward the end of the year, a winze was collared below the second shoot.

Comstock Keno Mines, Limited

Comstock Keno Mines, Limited carried out a development program on its Faro Gulch property during 1952. On the Nabob claim, the drift was continued for a further 86.25 feet. The drifting disclosed only disseminated mineralization with occasional narrow widths of galena.

The lower Gambler drift was advanced 174 feet to a total of 314.5 feet from the portal. At from 264 to 284 distance, a lens of galena was disclosed which averaged .95 feet in width, and contained 55% lead, and 72.6 ounces of silver per ton.

A caterpillar road was constructed from the Lucky Queen claim to the Gambler claim to give limited access to that working. Light surface prospecting was done on the Jean, Gold Star, Van Keuren, Ivy and Alberta L claims with no positive results.

Hoyle Mining Company

The Hoyle Mining Company held claims in the Beaver River area, and on Alverson Gulch of Mount Cameron. In 1952, it transferred both groups of claims to Beaver River Silver-Lead Mines, Limited. No work had been done on either property since 1947.

Jersey Yukon Mines, Limited

Jersey Yukon Mines, Limited employed an average of eight men from January to September. The adit on their Faro Gulch, Keno Hill, property was driven an additional 600 feet. Surface trenching was done on their Eagle claims on Galena Hill.

Klondike Keno Mines, Limited

Klondike Keno Mines, Limited employed from 9 to 19 men during 1952. Development work was carried out on the Besner-Milosevich property, under option. Mine and camp buildings, and mining machinery were set up preparatory to underground work. An adit was collared, and had been advanced 864 feet by December 31st. The 12,260 foot surface diamond drilling program begun in 1951 was completed. During the summer, prospecting, bulldozing, and test pitting were also done on four of the company's other claims.

Lustre Yukon Mines, Limited

Lustre Yukon Mines, Limited suspended their operations in November, 1951, and did only representation work on their Bunker Hill properties in 1952.

Mackeno Mines, Limited

Mackeno Mines, Limited employed an average of 30 men during 1952. They sacked some 20 tons of ore, but no shipments were made. There were 3,550 feet of underground workings completed, and a 50 man camp was established. Mackeno participated in the construction of the Yukeno Custom Mill in the Christal Creek area, Keno Hill. It was planned to bring the Mackeno Mine into production early in 1953.

Mayo Mines, Limited

Mayo Mines, Limited ceased working in 1952 and offered its mining equipment for sale, apparently terminating its operations on Sourdough Hill.

Mount Keno Mines, Limited

This company entered into an agreement with Amco Exploration Inc. whereby the latter was to spend $200,000.00 in developing Mount Keno Mines' property. Amco employed an average of 15 men underground with no positive results to the end of 1952. Prior to the agreement, Mount Keno shipped 88.432 short tons of silver-lead ore with a net smelter return of $38,913.05. Amco's development program was to continue into 1953, but Amco's continued involvement with Mount Keno Mines, Limited depended on more favourable results being obtained.

United Keno Hill Mines, Limited

During the year, shaft sinking was completed at the Hector mine, and four new levels at 125 foot intervals to a total depth of 500 feet below the adit level were opened. Development on three new levels proved the continuance of ore of better than mine-average grade and width at these depths. Active stoping on these levels was underway before the end of the year.

Further development of the Onek property revealed the occurrence of a considerable tonnage of ore of lower grade than normal for the district. A large quantity of this ore was trucked to the Elsa Mill for concentration during the summer months. Work at the Onek property was suspended during 1952.

Plans for 1953 included deepening the Hector winze for a further 500 feet, and sinking a shaft on the No Cash property to a total depth of 350 feet. Exploratory work on the Shamrock and No. 6 veins was scheduled to take place after the new road to the top of Keno Hill was completed early in the summer. No major construction was planned for 1952.

There were 138,863.5 tons of ore, and 36,330.0 tons of waste mined during 1952, and 138,281.9 tons of ore were milled. The average daily milling rate was 385.6 tons.

There were 12,768.48 tons of lead-silver concentrate, and 11,392.29 tons of zinc concentrate produced, containing 4,769,574.03 ounces of silver, 19,645,618.30 pounds of lead, 13,579,219.00 pounds of zinc, and 184,984.50 pounds of cadmium. Shipments to the smelter totalled 10,007.88 tons of lead-silver concentrate, and 9,184.31 tons of zinc concentrate.

The company employed 405 men, as of December 31st, 1952.

Yukeno Mines, Limited

This company employed an average of 28 men during 1952. Some 3,850 feet of horizontal and vertical underground work was completed during the year on the Formo claims near Christal Creek. Approximately 20 tons of high-grade ore were sacked during the year but no shipments were made. Yukeno Mines was participating in the construction of the custom mill being erected in the Keno area. Plans for 1953 include further development of the Formo property, with a limited production program.

WHITEHORSE DISTRICT

Lode prospecting in the Whitehorse District was rejuvenated when a party of three prospectors, Messrs. Green, Aird and Hankins, looking for deposits of copper, platinum and cobalt, were sent to explore the Shakwak Valley. They were sent on the strength of reports on the area by R.G. McConnell (1904) and D.D. Cairns (1914), and by more recent observations of mineral deposits and favourable geological phenomena appearing to extend from the vicinity of Burwash Creek towards the Alaska boundary at the White River, on the Southwest side of the Alaska Highway. On their second trip these prospectors made a discovery of a large outcropping pyrrhotite, which was found to contain nickel by a field test. Confirmation of the presence of nickel was received from the Department of Mines and Technical Surveys to whom a sample was sent for report immediately it was received at Whitehorse. Microscopic analysis showed 82.8% pyrrhotite, 11.0% violarite and 6.2% gangue. A chemical analysis of the sample showed a nickel content of 4.41% and a spectograph analysis of a silver button indicated strong traces of platinum and palladium. A later quantitative analysis of the platinum group elements showed an assay of 0.19 ounces to the ton and maintained the 4.41% nickel.

This discovery, on June 13th, 1952, led to extensive prospecting and staking. The supply of dimethylglyoxeme (nickel field test) was exhausted rapidly and within weeks several more nickel ore outcrops were located in the Quill Creek area. By the end of the year the Whitehorse Mining Recorder's Office had accepted a total of 1,605 claims for recording. A similar discovery was made in August opposite Mile 1173 on the southwest side of the Alaska Highway where a group of 88 claims was staked. Another group of 80 claims was staked at the headwaters of Edith Creek and Lynx Creek, 10 miles west of the Donjek River. On March 1st, 1953 another discovery was made on the right limit of the White River about 3 miles south of the highway, which started off another staking rush. To the end of the fiscal year, an additional 1,247 claims were staked as a result of this find, but had not yet been granted.

Hudson Bay Exploration and Development Company, Limited

Hudson Bay Exploration and Development Company, Limited managed to option the original groups of claims covering the initial discovery, and later acquired control of a total of 536 claims in the Quill Creek-Burwash Creek areas. Drilling carried out during 1952 on the Discovery group gave an average assay on nickel, copper, cobalt and platinum amounting to $42.00 to the ton. The company also acquired control of the group of 80 claims at the head of Edith Creek.

Hudson Bay Exploration and Development Company, Limited also carried out extensive development work on their group of 114 TOM claims on the Canol road at MacMillan Pass. The silver-lead-zinc deposit had 9,000,000 tons of ore blocked out.

Prospectors Airways, Limited

This company sent in a party to reconnoiter the area between the Canol Road at MacMillan River, and Keno Hill. While making final preparations at Whitehorse the geologist of the party discovered the presence of nickel in a sample of pyrrhotite brought in by prospectors from the Quill Creek area, which information diverted their attention to that area. A second party was formed which located a group of claims adjoining the Hudson Bay property. Later in the season they optioned 88 claims covering the direction of strike on a new discovery opposite Mile 1173 on the Highway toward the west bank of the White River.

Conwest Exploration Company, Limited

The RAM group of 72 claims located at the headwaters of Halfbreed Creek was optioned to this company, and preliminary development work to prove copper and nickel deposits was done. A second group of 88 claims located 5 miles south of Mile 1154, Alaska Highway, was also optioned, and was being investigated for reported nickel and asbestos deposits.

Jersey-Yukon Mines, Limited

This company acquired a group of claims adjoining the Hudson Bay and Prospectors Airways claims in the Quill Creek area. Sixteen of these claims were transferred to New Alger Mines Limited of Toronto, and were investigated by Transcontinental Resources Ltd. geologists.

Yukon Exploration and Development Company, Limited

Yukon Mining Company, Limited sponsored the initial prospecting in the Shakwak Valley, and granted options on their claims to Hudson Bay Exploration and Development Company, Limited. That company acquired control of Yukon Mining Company, Limited through buying shares on the open market. After that occurred, the prospectors and some of the former executive officers of Yukon Mining Company formed a new company, incorporated as Yukon Exploration and Development Co. Ltd. The new company acquired 72 claims at Halfbreed Creek having nickel and copper showings, 48 claims in the White River area, 28 claims at Lynx Creek adjoining the Hudson Bay Exploration and Development Company's Edith Creek "Larry" Group, 32 claims in the Edith Creek area, 19 claims on the antimony (stibnite) showing on Carbon Hill in the Wheaton River Area, and 24 claims in the Nansen Creek area where assays ran 60 ounces silver and 50% lead.

Other Lode Operations

Lundberg Explorations, Limited carried out an aeromagnetic survey of the Shakwak Valley area on behalf of East Rim Nickel Mines. In conjunction with J. Dumbrill, a consulting engineer, Lundberg Explorations optioned one group of claims at White River. They also staked some other anomalies.

American Smelting and Refining Company continued work at the "South Nahanni" property, in the Quartz Lake area of the Highland Plateau, under option from Noranda Mines Limited. Geochemical anomalies at this lead-zinc occurrence were drilled during the year with satisfactory results.

Yukon Tungsten Corporation, Limited continued drifting to intercept the vein of wolframite located on surface in 1943. A mill was being erected on the Alaska Highway at Mile 701.5.

Amalgamated Yukon Mines, Limited acquired the Rover, Beaver, Tung, and Sten groups of claims surrounding the Yukon Tungsten property at mile 701, Alaska Highway. They also optioned a group of 70 claims on the British Columbia-Yukon border, south of mile 706, Alaska Highway. Thirty of the claims were in Yukon, including the Mickey group.

Yukore Mines, Limited carried out surface exploration by trenching with a bulldozer and blasting on their claims north of Schnabel Creek in the Wheaton River area.

Active prospecting during 1952 was concentrated in the White River and Kluane Lake areas, but limited work was done in other areas. The Carmacks area saw some work, and prospecting was done in the areas north and south of the Whitehorse Copper Belt. Some work was done in the Squanga Lake area, where short fibre asbestos occurs, and north of Teslin Lake where cobalt bloom was reported. Staking was also done in the Giltana Lake area, near Aishihik Lake.

The Yukon Coal Company continued to operate the Tantalus Mine at Carmacks. Production during 1952 was 9,000 tons of coal, of which 6,000 tons were shipped to Keno Hill, 1,000 tons were shipped to Dawson City, and 2,000 tons were shipped to Cassiar Asbestos Mines, Limited at Cassiar in northern British Columbia.

PLACER MINING

The amount of placer gold recovered in the territory during 1952 on which royalty export tax was paid was approximately 98,150 troy ounces. There were 2,817 ounces recovered in the Whitehorse District. Data are not available on amounts recovered in the Dawson and Mayo Districts. Yukon Consolidated Gold Corporation produced 57% of the total production.

There were 47 new placer claims staked in 1952, and 1,099 claims were renewed. There were at least 1,156 placer claims in good standing on March 31, 1953, at the end of the 1952 fiscal year.

DAWSON DISTRICT

There were 10 new placer claims staked, and 26 claims were restaked during 1952. There were also 966 claims renewed during the year.

The heavy snowfall in the winter of 1951-1952 ensured an ample supply of water for the first part of the 1952 mining season.

Yukon Consolidated Gold Corporation, Limited

Property

The company maintained in good standing titles to all property deemed necessary to the pursuance of its mining operations, including hydraulic leases, placer mining claims, and water rights during 1952.

Power Generation and Transmission

The hydro-electric power plant, located on the North Fork of the Klondike River, operated throughout the year without serious interruptions, and furnished adequate power for all the company's operations. The total of kilowatt-hours generated was 31,191,000. The amount used by the mining company was 20,635,300 kilowatt-hours, or 66.2% of the output of the plant. There were 6,655,900 kilowatt-hours, or 21.3% sold to The Dawson Electric Light and Power Company for distribution to the City of Dawson, 1,475,500 kilowatt-hours, or 4.7% used by the power plant, and 2,424,400 kilowatt-hours, or 7.8% absorbed by transmission line and transformer losses. The cost of generation per kilowatt-hour sold and distributed was .418¢. The total cost of generation and transmission was $114,234.53.

Hydraulic Stripping

Hydraulic stripping of muck overburden was carried on at operations Nos. 6, 8, 9, 10 and 11 thoughout the season. Stripping was also done at operation No. 12 for a short time. The results of the stripping are as follows.

No.	Location	Operating Dates Started	Ended	Water Season Days	Water Used M.I.D.	Cu. Yds Removed	Duty
6	Granville	May 19	Aug. 16	68	22,023	183,792	8.35
8	Middle Sulphur	May 19	Oct. 2	115	51,646	540,829	10.47
9	Upper Sulphur	May 19	Sept. 21	125	29,754	450,197	15.13
10	Middle Dominion	May 19	Sept. 30	129	28,999	426,892	14.72
11	Hunker	May 23	Sept. 26	123	28,215	323,274	11.46
12	Dominion Benches	July 17	July 28	11	1,900	57,420	30.22
				95	162,537	1,982,404	12.20

Cold Water Thawing

Artificial thawing operations, using water at natural temperatures under pressure were conducted at four places during 1952. The detailed data on the operations are as follows.

Area No.	Location	Operating Dates Started	Ended	Water Season Days	Water Used M.I.D.	Cu. Yds Thawed	Duty
8	Middle Sulphur	May 12	Sept. 25	136	163,655	1,039,879	6.35
9	Upper Sulphur	May 14	Sept. 25	134	105,500	947,754	8.98
10	Middle Dominion	May 13	Sept. 18	128	150,339	1,194,703	7.95
11	Middle Hunker	May 16	Sept. 24	131	109,686	1,067,564	9.73
				132	529,180	4,249,900	8.03

Dredging

The company operated seven dredges during the season. The total number of dredge days was 1,309 or an average of 187 days for each dredge. This was about the same as in 1951, when 7 dredges operated for 1,322 days, at an average of 189 days each.

The operating season extended from April 29th, when Dredge No. 9. on Sulphur Creek started, to December 1st, when Dredge No. 4, on Bonanza Creek closed down. Dredge No. 3, on the Klondike River, was shut down on August 16th, and dismantled. It was built in 1912 at a cost of $500,000.00, and operated from 1913 to 1917. After being closed for eleven years, this dredge, one of the company's largest, operated continuously from 1929 to 1952. It mined and processed an average of 1,700,000 cubic yards of gravel per season, from which gold worth a total of $6,500,000.00 was recovered. The replacement cost of such a dredge in 1952 was $2,000,000.00. The company also held parts from Dredge No. 2, another dismantled dredge of the same size as No. 3. The parts were being held so that a new dredge could be constructed from the parts of Nos. 2, and 3, should economic conditions warrant it.

A summary of the 1952 dredging operations is below.

Dredge No.	Location	Bucket Size Cu. Ft.	Operating Dates Started	Operating Dates Ended	No. Days Operations	Cu. Yds. Dredged
3	Klondike River	16	May 20	Aug. 16	88	937,979
4	Bonanza	16	May 7	Dec. 1	208	1,058,942
6	Lower Sulphur & Dominion	7	May 8	Nov. 5	181	840,074
8	Middle Sulphur	7	May 4	Nov. 26	206	735,086
9	Upper Sulphur	5 3/4	Apr 29	Nov. 27	212	612,044
10	Middle Dominion	7	May 6	Nov. 27	205	843,802
11	Middle Hunker	7	May 3	Nov. 28	209	835,564
						5,863,491

Hydraulic Mining

A small hydraulic operation was started on Paradise Hill, a left limit bench, opposite Claim 65 on Hunker Creek. On the completion of preparatory work, which began about the first of May, the operation was started on July 7th, and continued until September 9th, with a total operation of 64 days. A total of 111,651 cubic yards of material was handled.

Production

The total production for 1952 was 56,322.643 fine ounces of gold and 12,037.43 ounces of silver, for which the company received a total of $1,918,823.53, representing an average value of 32.11 cents per cubic yard, or an average grade of approximately 0.013 crude ounces of gold per cubic yard mined.

Shops and Transportation

The machine shops, electrical repair shop, and automotive repair garage, all located at Bear Creek, were operated for the maintenance and repair of all company machinery and equipment. Truck freighting was done under contract with McCormick Transportation Company.

Employment

As in former years, arrangements were made with the National Employment Service to supply all labour requirements. The average number of men employed during 1952, by months, was as follows.

January	63	July	370
February	64	August	344
March	88	September	304
April	298	October	304
May	457	November	133
June	403	December	28

The peak employment was from May 17th to May 24th, at which time 464 men were employed. The total of man shifts worked during the year was 85,956. The total cash expenditure for wages and salaries was $1,167,024.26.

Miscellaneous Expenditures

Equipment and supplies not purchased locally amounted to $312,440.68, on which freight charges of $69,491.59 were paid. Local purchases amounted to $186,160.68.

Yukon Placer Mining Company

Yukon Placer Mining Company operated at two locations on Big Gold Creek during 1952. One operation consisted of a Washington Iron Works diesel-electric dredge, with 3½ cubic yard buckets. Preparatory work was begun April 20th, and mining operations began June 9th. The dredge continued operating until October 14th. Two D-7 Caterpillar bulldozers were used for stripping ahead of the dredge.

The other operation consisted of open cut mining carried out with three D-8 Caterpillar tractors with Isaacson dozers, and ground sluicing. Work was done between June 14th, and October 9th.

There were 25 to 28 men employed by the company during the year. Gold production from both operations was valued at $270,000.00, and consisted of approximately 7,875 fine ounces of gold. The wet season provided ample water. The only hindrance to operations was poor freight delivery due to heavy going on the local roads.

Clear Creek Placers, Limited

This company operated its dredge on the Left Fork of Clear Creek during June and July of 1952. The dredge reached its upstream dredging limit in July. Mining operations were halted, and the remainder of the summer was used to dismantle and move the dredge ten miles to a new site on Clear Creek, near the confluence of the Right and Left Forks. Reassembly of the dredge was well under way by October, and production was planned for the first week of June, 1953. During its two months of operation in 1952, the dredge mined and processed 120,000 cubic yards of material, from which 749.30 fine ounces of gold valued at $25,517.00 were recovered. Eighteen men were employed by the company during the year.

Yukon Gold Placers, Limited

Yukon Gold Placers, Limited continued mining at Henderson and Thistle Creeks during 1952. One dredge operated on Henderson Creek between June 17th, and October 6th. It mined and processed 230,000 cubic yards of gravel, from which 2,987.73 fine ounces of gold, valued at $101,466.00 were recovered. The recovery rate was approximately 0.017 crude ounces of gold, valued at 44 cents, per cubic yard. Twenty men were employed throughout the season.

Although operations at Henderson Creek were curtailed by extremely dry conditions during 1949 to 1951, which prevented keeping stripping and ground preparation well in advance of the dredge, there was a fairly good water supply in 1952 and much stripping was done.

The company also employed 20 men at its Thistle Creek property. The dredge there operated from June 4th to August 22nd, when it was closed because gold recovery was amounting to only half of the drilling estimates of the grade of the ground. There were no plans to resume mining at the property unless economic conditions for gold mining became more favourable.

The Thistle Creek dredge mined and processed 171,500 cubic yards of gravel during 1952 from which 799.93 fine ounces of gold valued at $27,094.00 were recovered. The recovery rate was approximately 0.006 crude ounces of gold, valued at 16 cents, per cubic yard.

Other Placer Operations

L.C. Bradbury and J.C. Cooper, with three employees, mined on Little Gold Creek, using 2 D-6 bulldozers. They mined between June 15th and September 30th, and recovered 500 ounces of gold. The operation had ample water, but was hindered for a time by frozen ground. During the season, Mr. Cooper sold his interest in the operation to J. Clark, and A. Warwick.

Messrs. H.C. and D.F. Boutillier continued their hydraulic work on Adams Gulch in 1952. Operations commenced March 30th, and continued until October 13th. Water was supplied through 3.5 miles of ditch and pipe to hydraulic monitors. They recovered 150.92 fine ounces of gold.

R.E. Troberg mined on his Bonanza Creek property from May 1st to October 31st in 1952. He used one bulldozer, and hydraulic methods, and operated with one employee. Water for the hydraulic operation was supplied by means of a reservoir and a four mile ditch. His production for the season was 281.7 fine ounces.

Mr. B. Bratsberg continued mining on Gold Bottom Creek, using a D-8 Caterpillar bulldozer, and hydraulic methods. With one hired man, he operated from June 3rd to September 10th in 1952, and recovered approximately 750 ounces of gold. Aside from the fact that Mr. Bratsberg's ground obviously contained good paydirt, his ground was prepared to be mined efficiently because he had spent two seasons stripping off large areas of barren gravels, and had allowed the remaining gravels to thaw. Consequently, he was enabled to mine without delays.

G.O. Shaw and G.G. Murdoch acquired claims on Gold Bottom Creek below Mr. Bratsberg's operation. From May 10th to September 15th 1952, they dug a 2,300 foot-long bedrock drain approximately 10 feet wide, and stripped 1,320 feet of ground in preparation for mining operations in 1953. They used one D-6 Caterpillar bulldozer, and hydraulic methods, and had one employee. They worked part-time themselves.

Mr. J. Bremner, his son, and an employee mined on Last Chance Creek using hydraulic equipment. Mining operations began April 15th, and ended October 20th. Production for the season was 138.90 fine ounces of gold. The water supply in 1952 was better than in 1950 and 1951.

Mr. R.S. Gould, and his son J.A. Gould continued their operations on a hillside property on Hunker Creek using one D-4 Caterpillar bulldozer, and hydraulic methods. Mr. R.S. Gould had previously operated on the property for many years, using hydraulic methods. They operated from April 15th to October 1st in 1952, and recovered 147.16 fine ounces of gold.

Northern Placers, Limited under the supervision of Mr. I.C. McFarland, moved placer mining equipment to the Dawson area from Ophir, Alaska, in 1952. The equipment included two TD-18 International bulldozers, one P&H dragline with 1.5 cubic yard capacity, two pumping units, and miscellaneous tools. On July 1st, they commenced operations on claims on Adams Gulch and Bonanza Creek which they held under lease from the Boutillier brothers, C.C. Henderson and C.W. Craig. Employing from seven to ten men, they operated until October 15, and produced 201.37 fine ounces of gold. They reported that their water supply was good but that their operations were hindered by frozen ground.

Messrs. A.T. Fry, and J. Boyd acquired claims on Bonanza Creek, and on a small tributary called Monte Cristo Gulch. They began operations on Monto Cristo Gulch on June 1st, which was a little late in the season, but owing to a late fall and plentiful supply of water, they were able to mine until November 4th. They recovered 100.15 fine ounces of gold. Mr. Boyd was not involved in the mining but Mr. Fry, his wife and youngsters operated one bulldozer, a 1-½ inch pump, and sluices on bedrock remaining uncovered from old workings. Their water supply was unique. They were working on the Gulch above an old hydraulic cut which had filled with sediment over the years and had formed a reservoir. By allowing water to drain back into the reservoir after it was used for sluicing, a constant supply of water was maintained.

Messrs. M.D. and L.G. Cole moved to Mayo late in 1951. During 1952 only assessment work was performed on their properties on Bonanza, All Gold, and Dominion Creeks. Gold production was negligible.

J.R. Colbourne and E. Schink, with three employees, continued mining on their hillside property on Hunker and Hester Creeks. They worked using one bulldozer and hydraulic methods from April 25th to September 15th, and recovered 51 ounces of gold.

R. Hastie and J.E. Lundin mined on Quartz Creek using a mining method typical of early placer mining. They sank shafts to bedrock, and tunnelled or "drifted" out along bedrock from the bottom of the shaft. The paydirt was hauled to surface by means of buckets and a hand-windlass. The mining was done during the winter, and the resulting pile or "dump" of paydirt sluiced in the summer to recover the gold. Messrs. Hastie and Lundin operated from March 15th to October 10th during 1952, and recovered 44 ounces of gold.

John Strugar mined on Quartz Creek using methods similar to those of Messrs. Hastie and Lundin, except that he hoisted his paydirt from his shafts by means of a steam hoist. Mr. Strugar, a pioneer miner in his seventies, worked alone from May 1st to October 1st during 1952. He recovered 50 ounces of gold.

Adolphe and Alcide Coulombe mined on the upper end of Ballarat Creek using one bulldozer, and open-cut mining methods. They operated from April 14th to October 6th, and recovered 224.13 fine ounces of gold. Supplies for the operation were delivered to the mouth of Ballarat Creek on the Yukon River by White Pass and Yukon Route Steamers, and then were trucked upstream to the mining operations by the Coulombe brothers.

Ballarat Mines, Limited continued their bulldozer and sluicing operation on the lower end of Ballarat Creek during 1952. It employed 5 men, 2 D-8 Caterpillar tractors with Isaacson dozers, and one TD-35 International tractor. Preparatory work was begun April 20th, and sluicing started June 15th. Sluicing finished September 29th, and the camp closed October 15th. Approximately 2,650 ounces of gold valued at $90,000.00 were recovered. Infrequent freight deliveries by river boat hindered operations at times.

George Fant and Ivor Norbeck acquired five miles of placer ground on Scroggie Creek, a left limit tributary of the Stewart River. Parts of Scroggie Creek had been prospected and mined in the past by early day, primitive, hand methods, although production was not great. Messrs. Fant and Norbeck thoroughly prospected the area during 1951 and 1952, and were convinced that modern bulldozing and hydraulic mining methods could be used on the property profitably. During 1952 they stripped approximately 16,000 cubic yards, in three cuts about 600 feet apart, and dug two bedrock drains, each 500 feet long by 14 feet wide by 10 feet deep in preparation for sluicing operations in 1953.

Reno Gold mines was not active in 1952, and allowed their properties on Canadian and Casino Creeks to lapse. The ground was staked into prospecting leases by individuals, but there were no mining operations in the area during 1952.

MAYO DISTRICT

There were 2 new placer claims and 67 renewals issued during 1952. Claims in good standing totalled 79. Placer mining was undertaken in the Mayo District for the first time in several years. Ballarat Mines, Limited mined on the Middlecoff property on Highet Creek under a lease agreement. An average of 5 men was employed during the season. Production totalled approximately 600 fine ounces of gold, and was valued at $20,406.88. Other properties were maintained in good standing, but no other mining operations were carried out.

WHITEHORSE DISTRICT

There were 9 new placer claims, and 66 renewals issued during 1952. There were also 18 prospecting leases issued. The 17 new leases covered 43 miles, while 1 lease covering 3 miles was renewed.

Placer prospecting activity continued to decrease in the Whitehorse District, due to the lack of increase in the price for gold, and to the increased activity in lode prospecting.

Established operators continued to function with the aid of The Emergency Gold Mining Assistance Act. Total production during 1952 was 2,817.00 ounces, compared to 1,173.4 ounces in 1951. Recoveries from the various creeks were as follows.

Gladstone Creek	2,030.50 oz.
Burwash Creek	732.05 oz.
Cottoneva Creek	9.65 oz.
Miscellaneous	44.80 oz.
Total	2,817.00 oz.

Burwash Mining Company, Limited continued operations on Burwash Creek with a shovel, bulldozers, and washing plant. The company was hindered by having to do road building work made necessary by the previous year's deluges. Further difficulties were experienced when the shovel overturned in the creek, resulting in the death of the shovel operator. Total gold recovery for the season was 617.09 fine ounces.

Kluane Dredging Company, Limited began operations with heavy equipment on July 1st. Some of the equipment and supplies were transported across the ice of Kluane Lake to the mining site on Gladstone Creek during the winter of 1951-1952. Total production from the operation during 1952 was 1,580.36 fine ounces.

Louis Engle worked his property on Cottoneva Creek in the Livingstone Creek area during 1952. He recovered 9.65 ounces of gold.

CHAPTER 14.

MINERAL INDUSTRY OF YUKON, 1953

INTRODUCTION

Reports by W.G. Brown, Commissioner, and the Dawson Mining Recorder were used in compiling information on Yukon's mineral industry during 1953. Additional information came from publications of the Emergency Gold Mining Assistance Act.

MINERAL PRODUCTION

Mineral production from lode and placer deposits during the year ending December 31, 1953 was valued as follows.

Gold	2,274,474.00
Silver	5,577,530.00
Lead	4,083,449.00
Tungsten	475.00
Zinc	2,156,046.00
Cadmium	476,852.00
Coal	169,736.00
Total	$14,738,562.00

LODE MINING

The Galena Hill-Keno Hill area continued to be the principal centre of lode mineral production in the territory during 1953. Exploration activity was concentrated in the Whitehorse District during the year, partly because of the copper-nickel occurrences found in the Quill Creek, White River, and Shakwak Valley areas in 1952, and partly because of the discovery of a silver-lead-zinc occurrence in the Vangorda Creek area. Interest was also attracted to the district when a copper-gold-silver occurrence was located near Mount Freegold early in the winter of 1953-1954.

In the Dawson District, there were 130 lode claims in good standing on March 31, 1954. There were 62 new claims recorded in the Mayo District, and 1,008 claims were renewed. There were 1,626 claims in good standing in the district. There were also 166 quartz leases in good standing. In the Whitehorse District, 3,989 new claims were staked, and 1,284 claims were renewed. The increase from 1,354 new claims and 689 renewed claims during the previous year reflects the high level of prospecting activity in the Whitehorse District during the year, and the staking activity which centered on the significant new discoveries.

Mineral production from lode operations in the Elsa-Keno Hill area during 1953 totalled 20,211.2 tons of concentrate and high grade ore containing 37,136,406 pounds of lead, 7,096,039 ounces of silver, 28,122,603 pounds of zinc, and 358,157 pounds of cadmium. A small additional amount of ore may have been mined by laymen.

Yukon Coal Company mined 19,985.2 tons of coal during 1953 at its Carmacks area Tantalus Mine.

DAWSON DISTRICT

There was no lode mining done in the Dawson District during the year. Routine assessment work, and limited prospecting were done.

Twelve claims were staked on the hilltop immediately east of Dawson and 42 claims were staked on a ridge on the left limit of Thomas Gulch, a tributary of the Klondike River 2 miles east of Dawson. Both groups of claims were staked over known asbestos occurrences.

Twenty-six of the 38 lode claims staked in 1952 on Gold Bottom Creek were maintained in good standing. The Yukon Consolidated Gold Corporation, Limited did assessment work on the property during 1953, under agreement with the claim owners. After carrying out the work, the company dropped its option. The ore recovered from the property contained bornite.

Only assessment work was done on claims covering silver-lead prospects along the Yukon River, approximately 25 miles downstream from Dawson. These occurrences had also been known for many years.

Twelve claims were staked on Sixtymile Creek near the mouth of Miller Creek. They covered another old silver-lead prospect which had been previously staked more than once. Claims covering a silver-lead-zinc occurrence in the Little Twelvemile River area were allowed to lapse. Claims held by A. Hoidahl, J. Crowdy and K. Gardlund at the head of Annett and Mason Creeks were allowed to lapse. The claims were staked in 1951 over a tungsten-molybdenum-gold occurrence reported at the time to contain nearly 50% tungsten.

The remaining claims in the Dawson District were widely scattered. Most covered prospects discovered many years previously. Only assessment work was done on the claims. No development work was done.

MAYO DISTRICT

Mineral exploration in the Mayo area was at a low level at a low level during 1953, although several known properties were being developed, and several companies were carrying out mining operations.

Little interest was shown in the Stand-to Mountain area in 1953. A few of the 164 claims staked in the area in 1950 were still held by individuals. Only assessment work was done on claims on Rambler Hill during 1953.

Ankeno Mines, Limited

Ankeno Mines, Limited carried out surface and underground exploration of the Star, Petain, and Petain No. 2 claims during 1951, and 1952, with favourable results. However, all work at the property was suspended on March 16th, 1953.

Beaver River Silver-Lead Mines Limited

Beaver River Silver-Lead Mines Limited held 11 leased claims, and 11 claims under annual renewal in the Beaver River area. The claims held under yearly renewal were surveyed in 1953. No development work of any kind was done on the claims in the years 1949 to 1953. The company also held eight claims on Alverson Gulch on Mount Cameron. They, too, were surveyed during 1953. No development work was done on them in the years 1948 to 1953.

Bellekeno Mines, Limited

This company operated through 1953 with an average of 60 employees. No exploration was done. All development was confined to the areas of known ore zones, for the purpose of getting into production. The internal shaft from the second to third levels was deepened to the fourth level, and drifting on the fourth level was well underway. Bellekeno Mines, Limited milled 6,020 tons of ore at the Mackeno mill, from which 814.67 tons of concentrate containing 310.09 ounces per ton silver, 67.76% lead, and 5.05% zinc were produced. The concentrate, and 266.0 tons of high-grade ore containing 195.07 ounces per ton of silver, 72.63% lead, and 0.96% zinc were shipped to a smelter. There were 304,509 ounces of silver, and 1,490,420 pounds of lead recovered from the concentrate and high-grade ore.

Comstock Keno Mines, Limited

Comstock Keno Mines, Limited operated with a small crew during the summer of 1953, and explored several properties owned by the company on Keno Hill. On the Gamber claim, the lower drift was advanced 200.5 feet to a total of 515.0 feet from the portal. The vein continued to show good strength but failed to disclose commercial-grade ore, although a section from 363 to 413 feet showed veinlets of galena and sphalerite. A short raise to 31 feet above the mineralization showed it weakening. Although the vein structure was a strong one, lateral exploration at the level of the drift failed to disclose sufficient quantities of ore to support a profitable mining operation.

Stripping on the Gold Star Claim disclosed a considerable quantity of vein float which averaged 70.9 per cent lead and 160.1 ounces of silver per ton. This float was traced uphill to a vein believed to be a continuation of the Porcupine vein on the adjoining United Keno Hill Mines, Limited property. The discovery was made too late in the season to allow complete stripping. However, on account of the high values obtained, and the proximity of favorable rock units, a tractor road was bulldozed to the site. A cross-cut was planned, which would intersect the calculated locus of the vein approximately 315 feet from the portal, and 170 feet below the outcrop.

Jersey Yukon Mines, Limited

Jersey Yukon Mines, Limited suspended operations in June, 1953. They had no plans for resuming work at a later date.

Klondike Keno Mines, Limited

Klondike Keno Mines, Limited operated from April 1st to May 31st, when operations were suspended. The work done in 1953 was confined to preparing for a complete shut-down.

Mackeno Mines, Limited

Mackeno Mines, Limited completed its mill during 1953, and began custom milling ore from Bellekeno Mines, Limited as well as ore from its own property. The company had 461 employees during the year, and produced 32,816 tons of ore. From the ore, 3,501 tons of silver-lead concentrate, and 812 tons of zinc-cadmium concentrate, containing 803,880 ounces of silver, 4,572,000 pounds of lead, 1,274,000 pounds of zinc, and 10,192 pounds of cadmium were produced. Shipments to the smelter totalled 3,844 tons of concentrates and 42 tons of high grade ore, from which 722,119 ounces of silver, 4,125,200 pounds of lead, 1,143,200 pounds of zinc, and 9,072 pounds of cadmium were recovered.

Mount Keno Mines, Limited

This company was inactive during 1953. Amco Exploration, Inc. carried out a development program on Mount Keno's ground, but abandoned the property. Some high-grade ore was sacked and shipped, but production figures were not reported.

United Keno Hill Mines, Limited

United Keno Hill Mines, Limited achieved its highest production rate since beginning operations in 1946. Silver production reached an average of 500,000 ounces per month. During 1953, 10,112 feet of drifting and cross-cutting, 7,301 feet of raising, and 9,182 feet of diamond drilling were done in the course of mining and development work. The internal shaft at Calumet mine was sunk an additional 98 feet.

The company had 470 employees, and mined 159,218 tons of ore during the year. From this, they produced 21,407 tons of lead-silver concentrate, and 20,225 tons of zinc-cadmium concentrate, containing 5,987,650 ounces of silver, 31,073,986 pounds of lead, 26,848,603 pounds of zinc, and 347,965 pounds of cadmium. Pelletization of the concentrates was begun in the late fall. The company shipped 21,448 tons of lead-silver concentrates, and 21,458 tons of zinc-cadmium concentrates to the smelter during 1953, from which 6,128,311 ounces of silver, 31,325,349 pounds of lead, 26,083,690 pounds of zinc, and 369,612 pounds of cadmium were recovered.

Yukeno Mines, Limited

Yukeno Mines, Limited operated from April 1st to July 20th during 1953, when operations at the property were suspended.

Other Lode Operations

Bibis Yukon Mines, Limited did no work of any kind on its ground on Keno Hill. Brewis Red Lake Mines, Limited did not resume operations after discontinuing work in August, 1952. Kenmayo Mines, Limited did only essential representation work on its 22 claims on the southerly slope of Keno Hill. North Denison Mines, Limited continued to hold its 14 claims on Galena Hill. The company had done only assessment work on the claims since acquiring them in 1951. Packeno Mines, Limited continued to hold 11 claims on Galena Hill. That company had also done only assessment work on the claims since acquiring them in 1950 and 1951.

WHITEHORSE DISTRICT

Lode prospecting in the Whitehorse District continued to be very active during 1953, and was highlighted by the discovery of several significant mineral occurrences. The search for copper-nickel occurrences in the Quill Creek, White River and Shakwak Valley areas continued in 1953. Properties in the area were being examined by Hudson Bay Exploration and Development Company, Limited, Prospectors Airways, Limited, Teck Explorations, Callinan Flin-Flon Mines Limited, and New Alger Mines, Limited.

Considerable activity occurred in the vicinity of Vangorda Creek, approximately 36 miles below Ross River on the right limit of the Pelly River, where a discovery of silver-lead-zinc mineralization was made by local inhabitants. Companies active in the area included Prospectors Airways, Limited, Conwest Exploration, K. Springer, and Alator Corporation. A total of 951 claims, covering the entire area being explored, was recorded.

During the early part of the winter of 1953-1954, the discovery of a copper-gold-silver occurrence made earlier in the season by P.F. Guder at Big Creek in the vicinity of Mount Freegold was reported. Several groups of claims were staked in the vicinity of the discovery.

Hudson Bay Exploration and Development Company, Limited

This company was active in several parts of the territory during 1953. Tunnelling, and additional diamond drilling were done on the discovery copper-nickel property at Quill Creek, with encouraging results. The company had the Tom claims, which covered its lead-zinc-silver property on the Canol Road at MacMillan Pass surveyed preparatory to applying for 21 year leases. The company also carried out drilling programs on claims at Dugdale Lake on the southern end of the Whitehorse Copper Belt, and at Giltana Lake near Aishihik Lake.

Prospectors Airways, Limited

In March, 1953, Prospectors Airways, Limited optioned 32 claims covering a new discovery on the east bank of the White River, opposite the mouth of Miles Creek. Some diamond drilling was done on the property. The company also acquired control of 81 claims in the Vangorda Creek area, including their option on the initial discovery.

Other Lode Operations

American Smelting and Refining Company continued diamond drilling and other exploration work at the "South Nahanni" property in the Quartz Lake area.

The aeromagnetic surveys carried out by Lundberg Explorations, Limited for East Rim Nickel Mines during 1952 outlined six major aeromagnetic anomalies in the western section of the Shakwak Valley. Four of these anomalies were further investigated by ground geophysical methods during 1953.

Yukon Tungsten Corporation Limited set up a mill to recover tungsten ore at Mile 701, Alaska Highway, but after a series of breakdowns with their machinery, decided to cease operations.

The Yukon Coal Company produced 19,985.2 tons of coal during the year from their Tantalus Butte Mine near Carmacks. The coal was shipped to Elsa, Dawson, Whitehorse, and Cassiar.

PLACER MINING

The amount of gold recovered in the territory in 1953 on which royalty export tax was paid was approximately 82,600 troy ounces produced as follows: approximately 77,502 ounces, Dawson District, 1,059.0 ounces, Mayo District, and 4,038.75 ounces, Whitehorse District. Total production was 16% less than in 1952, with the decrease in production occurring in the Dawson District at the operations of Yukon Consolidated Gold Corporation. The company closed Dredge No. 4, one of its largest, at the end of the 1952 season, and ran six, rather than seven, dredges during 1953. As a result, the company recovered only 38,500 ounces of gold in 1953 compared to 57,322 ounces in 1952. Its production fell from 57% of the total production of Yukon to 47% over the same period.

The number of new claims staked in the Dawson District in 1953 increased sharply over 1952. The number of claims renewed in all districts also increased. Data for the Dawson District are for calendar, rather than fiscal years, however, and do not allow total numbers of claims to be calculated.

DAWSON DISTRICT

There were 92 new, and restaked placer claims recorded in the Dawson District in 1953. There were also 1,358 claims renewed during the calendar year.

Water supply in the district was poor in the early part of the season due to the very limited amount of snow which fell during the winter of 1952-1953. There were heavy rainfalls across the territory during the latter part of June, but the Dawson area had a warm, dry period during late July and August. In many places, however, the autumn rainfall was unusually heavy, and brought up water supplies at the end of the mining season.

Yukon Consolidated Gold Corporation, Limited

The company operated six dredges during the season. The total number of dredge days was 1,138, or an average of 190 days each. This was less than in 1952, when seven dredges operated for 1,309 days, at an average of 187 days each.

The operating season extended from April 25th to November 11th. The dredges which operated were Nos. 3, 6, 8, 9, 10, and 11. They were situated on Bonanza, Lower Dominion, Middle Sulphur, Upper Sulphur, Middle Dominion, and Middle Hunker Creeks, respectively. A new dredge was installed on the hillside on Dominion Creek below Jensen Creek in preparation for mining operations in 1954.

The hydraulic mining operation on Paradise Hill, a left limit bench on Hunker Creek, continued working in 1953. It was started as an experiment in 1952, and was very successful in 1953.

The gold produced by the company during 1953 totalled approximately 38,500 ounces and was valued at $1,309,106.00.

The maximum number of employees of the company during the year was 467, and the minimum number was 57.

Yukon Placer Mining Company

Yukon Placer Mining Company commenced preliminary operations on their Big Gold Creek properties at the mouth of Glacier Creek on April 20th. Dredging began June 19th, and continued until October 15th. Two D-7 Caterpillar bulldozers and a pumping unit were used for stripping ahead of the dredge. Open-cut mining began May 25th, and continued until October 3rd. Three D-8 Caterpillar tractors, and a pumping unit were used in the open-cut operations. One D-4 Caterpillar tractor, and a drill were used in a drilling program.

In all, there were 434,750 cubic yards of gravel processed from which 9,366.60 fine ounces of gold and 1,528.28 fine ounces of silver valued at $324,720.26 were recovered. The gravel processed had an average recovery of 0.025 crude ounces of gold per cubic yard, a value of 74.7 cents per cubic yard.

Although there was a shortage of water at times during the season, the company reported that mining conditions were generally good. The camp was closed October 16th. There were twenty-eight employees.

Clear Creek Placers, Limited

Clear Creek Placers, Limited started dredging on June 7th, and stopped mining on October 27th, after operating for 143 continuous working days. The company reported that 3,233 crude ounces of gold containing 2,69[illegible].68 fine ounces of gold valued at $93,466.00 were recovered from the 248,800 cubic yards of gravel mined and processed by the dredge. The gravel processed had an average recovery of 0.012 crude ounces of gold per cubic yard, or a value of 37.5 cents per cubic yard. The company reported that due to high prices of mining supplies and transportation, their operating expenses continued to be very high, and the margin of profit was very small and unsatisfactory. An average of 18 men was employed during the season.

Yukon Gold Placers, Limited

Yukon Gold Placers, Limited continued to work on claims on Henderson Creek leased from the Yukon Consolidated Gold Corporation, Limited. Their dredge did not operate during 1953, as operations were confined to ground preparation. Approximately 270,000 cubic yards of stripping was completed. An average of 10 men was employed at this work during the season.

The company did not operate its dredge on Thistle Creek, which was shut down part way through the 1952 season because of poor recovery rates, during 1953. The claims were maintained in good standing by assessment work done previously.

Other Placer Operations

L.C. Bradbury, J.E. Clark, and A. Warwick continued their mining operations on Little Gold Creek during 1953 under the name Terra Mines, Limited. They worked from April 20th to October 15th, with 4 men and two D-6 Caterpillar bulldozers, and recovered 923.75 fine ounces of gold.

Messrs. H.C. and D.F. Boutillier ran their hydraulic operation on Adams Gulch from March 23rd to October 11th. They did all the work themselves. Due to the light snowfall in the winter of 1952-1953, their supply of water from spring run-off petered out on May 31st. However, from August 15th to October 11th, there was sufficient rainfall to supply water for mining. Water was transported by way of a 3.5 mile ditch and pipeline to hydraulic monitors, and resulted in 65 p.s.i. water from 5 and 6 inch monitor nozzles. The Boutillier brothers mined 18,000 cubic yards of gravel, and recovered 158.69 fine ounces of gold.

R.E. Troberg worked alone on his Bonanza Creek claims during 1953. He began mining on May 1st, and finished on October 25th. He used one TD-9 International bulldozer, and hydraulic methods, and produced 102.43 fine ounces of gold. His water supply was good, but his production was low due to equipment breakdowns, and the unavailability of parts from August 12th to October 1st.

Mr. B. Bratsberg continued his very successful operation on Gold Bottom Creek during 1953. Working with one employee, and using bulldozer and hydraulic methods, he recovered 959 ounces of gold between June 1st and September 22nd.

Mr. G.O. Shaw took over his partner G. Murdoch's share of their operation on Gold Bottom Creek below Mr. Bratsberg's operation. He operated using one bulldozer and hydraulic methods, with one employee, from May 1st to September 30th. They mined and processed 35,000 cubic yards of gravel, and recovered 333.98 fine ounces of gold.

Mr. J. Bremner, his son, and two employees ran their hydraulic operation on a Last Chance Creek bench from April 1st to October 31st. Their water supply was normal during the early and middle part of the season, and was unusually good in the fall when it was most needed. Their production in 1953 was 476 ounces of gold, compared to 180 ounces in 1952.

Mr. R.S. Gould, and his son J.A. Gould operated with one other man on Nugget Hill, Hunker Creek, from April 20th to October 5th using hydraulic methods, sluices, and one D-4 Caterpillar bulldozer. They recovered 129.87 fine ounces of gold valued at $4,300.00 from the 9,000 cubic yards of gravel processed. A lack of water held up their operations during July and August.

John Gould also spent part of the season opening up new ground on Gay Gulch, a tributary of Eldorado Creek. Production was 72.35 fine ounces of gold. Mostly preparatory work was done.

Northern Placers, Limited worked from April 1st to October 10th during 1953. Operations were carried out on properties leased from the Boutillier brothers, C.W. Craig, C.C. Henderson and T.R. Campbell, and Joseph Castonguay on Adams Gulch, Bonanza Creek, Eldorado Creek and Gay Gulch. From spring to mid-August there was a shortage of water but supply was good from August to the end of the season. Equipment used included two TD-18 International bulldozers, one P&H dragline with 1.5 cubic yard capacity, and hydraulic stripping and sluicing equipment. Production was 794.83 fine ounces of gold. The company had 7 employees.

Messrs. A.T. Fry and J. Boyd operated one bulldozer from April 15th to September 30th on their property on Monte Cristo Gulch. They spent most of the season preparing new ground. The spring run-off was much less than in 1952, and left the operators facing a shortage of water. From August 17th to September 30th, they pumped water from below their property, and were able to sluice for 40 hours. They recovered 157.43 fine ounces of gold.

Brewis Red Lake Mines, Limited took over 6 miles of placer property from Messrs. L.G. and M.D. Cole on All Gold Creek, a tributary on the left limit of the Klondike River, and also staked an additional adjoining 5 miles on the same creek. In 1953 they built an access road into the area and did stripping with a bulldozer, and drilling, preparatory to mining in 1954. The Cole brothers had two employees carry out hydraulic work on their Bonanza Creek property during 1953. No gold was produced, as all work was directed to preparing ground for mining in 1954.

E. Schink and one employee mined the property on the hillside on Hunker and Hester Creeks which was held by Mr. Schink and J.R. Colbourne. They operated using hydraulic methods from May 20th to September 30th, and recovered 70 ounces of gold. Their production was curtailed due to the necessity of extensive repairs to their water ditch-line.

Adolphe and Alcide Coulombe continued mining on the upper end of Ballarat Creek. They mined from May 1st to September 21st, using one D-4 Caterpillar bulldozer, and open-cut mining methods, partly on old workings, and partly on virgin ground. The first half of the season was very dry, but there was an abundance of water during the last part of the season. They recovered 113.61 fine ounces of gold. The Coulombes reported that the 1953 work cleaned up the gold-bearing gravel on their property, and operations would not continue in 1954.

Ballarat Mines, Limited began work on their property on the lower part of Ballarat Creek on April 16th, and began sluicing June 9th. They finished sluicing September 18th, and closed their operation on October 1st. They used two D-8 Caterpillar bulldozers, and open cut mining methods. One D-8 Caterpillar bulldozer, and a drill were used for prospecting. The company mined and processed 38,000 cubic yards of gravel, or an average thickness of 13.5 feet from an area of 76,000 bedrock square feet. They recovered 998.98 fine ounces of gold and 145.67 fine ounces of silver valued at $34,684.00. The average recovery from the gravel mined was 0.030 crude ounces of gold per cubic yard, or 91.3 cents per cubic yard. Mining conditions were extremely difficult because of very rocky ground, which greatly slowed thawing. Ballarat Mines, Limited, which was under the same management as Yukon Placer Mining Company, had 8 employees during the 1953 season.

George Fant and Ivor Norbeck began their bulldozing and sluicing operations on Scroggie Creek during 1953 on ground prepared the previous year, and operated from May 1st to November 10th. They had a good supply of water for the season, and recovered 259.50 fine ounces of gold.

Placer leases held on Annett and Mason Creeks, tributaries of the Blow River, were allowed to lapse in 1953. Problems in gaining access to such remote properties affected the possibility of their development.

During 1953, there were still a few of the pioneer gold miners scattered about the creeks in the Dawson District, and mining by hand methods such as pan, rocker, and long-tom. Their production was small.

MAYO DISTRICT

There was one new placer claim issued in the Mayo District during 1953, and 72 claims were renewed. Placer mining activity continued at a low level through the year. Approximately 1,059 ounces of gold were recovered. Little prospecting was done.

Ballarat Mines, Limited did not resume work on the Middlecoff ground on Highet Creek. The tests given the ground during 1952 indicated that it was too deep for the type of equipment owned by the company, and that there was insufficient virgin ground to warrant purchase of suitable machinery.

Waddco Placers, Limited worked on the Barker ground on Haggart Creek for a short test period during the summer, with encouraging results. They recovered 334.78 fine ounces of gold.

Fred Taylor resumed mining on his Dublin Gulch property after a shutdown of several years. He worked his ground alone, using a bulldozer. Production amounted to 549.18 fine ounces of gold. The concentrates from this creek contained commercial quantities of scheelite. They were being accummulated with the object of shipment when a sufficient amount was on hand.

Clifford Greig spent some time prospecting his ground on Bawn Boy Gulch, but had negative results.

WHITEHORSE DISTRICT

Placer prospecting in the Whitehorse District remained dormant during the year. There were eight new claims, and 72 renewals issued during 1953. Placer leases covering 34 miles were issued, and leases covering eight miles were renewed.

Established operators continued to mine, and their total production increased from 2,817.00 ounces in 1952 to 4,038.75 ounces in 1953. Recoveries from the various creeks were as follows.

Gladstone Creek	2,352.20 oz.
Burwash Creek	1,590.50 oz.
Sheep Creek	53.50 oz.
Miscellaneous	42.55 oz.
Total	4,038.75 oz.

There was very little snowfall during the winter of 1952-1953, and little rain prior to June 20th. Heavy general rains occurred in the latter part of June, and cool, cloudy weather with frequent showers continued through July and August.

Burwash Mining Company, Limited experienced further difficulties at its Burwash Creek operation due to road washouts. The company was forced to construct an alternative road over higher ground from the Duke River. Gold recovered from their mining operations totalled 1,338.23 fine ounces.

Kluane Dredging Company also experienced some difficulty at its Gladstone Creek operation due to washouts, but recovered 1,903.39 fine ounces of gold during the 1953 mining season.

CHAPTER 15.

MINERAL INDUSTRY OF YUKON, 1954

INTRODUCTION

Information on the mineral industry of Yukon during 1954 was compiled from a report by W.G. Brown, Commissioner, and correspondence from W.H.S. McFarland of Yukon Consolidated Gold Corporation. Additional information came from the Annual Report of the Department of Northern Affairs and Natural Resources, Northern Administration and Lands Branch, and from publications of the Emergency Gold Mining Assistance Act.

MINERAL PRODUCTION

Mineral production for lode and placer deposits during the year ending December 31, 1954 was valued as shown in the table below. Also shown in the table are cumulative totals of the values of minerals produced in the territory prior to December 31, 1954.

Commodity	1954	Cumulative Total To Year Ending December 31, 1954
	$	$
Gold	2,991,721	237,921,201
Silver	5,627,435	44,151,479
Lead	4,340,004	21,788,094
Copper	-	2,711,695
Tungsten	-	25,888
Zinc	2,757,725	8,950,853
Antimony	-	173
Cadmium	366,223	1,491,505
Coal	225,000	1,494,069
Total	16,308,108	318,534,957

LODE MINING

In the Mayo District, mineral production continued at a high level during 1954. Prospecting activity was spurred by the discovery of promising base metals deposits in the Kathleen Lakes and Worm Lake areas. Exploration and development work continued in the Whitehorse District in the Quill Creek, Vangorda Creek, and White River areas. A new silver-lead-zinc occurrence was found in the Ketza River area.

There were 46 new claims recorded, and 84 claims were renewed in the Dawson District during 1954. There were 160 lode claims in good standing as of December 31st, 1954. In the Mayo District 384 new claims were recorded, and 1,109 claims were renewed. There were 1,981 quartz claims in good standing, and 184 quartz leases in good standing. In the Whitehorse District, there were 1,800 new claims recorded, and 2,849 claims were renewed.

Mineral production from lode claims in the Elsa-Keno Hill area during 1954 was 46,868 tons of concentrate containing 33,064,207 pounds of lead, 7,160,271 ounces of silver, 28,091,640 pounds of lead, 318,790.5 pounds of cadmium, and 71.4 ounces of gold. An additional 77.4 tons of concentrate and 150 tons of high grade ore of unknown metal content were also produced. There may have been additional production by laymen working high-grade pockets of ore.

Coal production from the Carmacks area Tantalus Mine of Yukon Coal Company totalled 11,800 tons in 1954.

DAWSON DISTRICT

There was no lode mining done in the Dawson District in 1954. Routine assessment work, and a limited amount of prospecting were done. Some exploration for oil was done in the northern part of the district by Peel Plateau Exploration, Limited.

Prospecting and assessment work were done on the asbestos property on the left limit of Thomas Gulch, 5 miles east of Dawson City. No asbestos of marketable value was found.

Mr. J. Sestak and Mr. F. Caley held a small group of claims covering a fluorite prospect at the mouth of Matson Creek on the Sixtymile River. Only assessment work was done on the property.

The 16 claims covering the silver-lead-tungsten occurrence on Casino Creek were maintained in good standing, but only assessment work was done.

Previously known silver-lead-zinc occurrences 25 miles downstream from Dawson were restaked, but no work was done on the claims.

The other quartz claims in the district were situated as small groups, or single claims scattered across the district. Most covered prospects which had been known for many years.

MAYO DISTRICT

Mineral exploration in the Mayo District increased during 1954 as a result of the discovery of a new copper occurrence on the west side of Worm Lake by Robert Auston, a big game outfitter and guide. This lake was known to local prospectors as Rae Lake, as it was formerly the headquarters of two well known trappers and prospectors, Frank Rae and Fred Hoffman. Prospectors Airways Limited optioned the original group of 24 claims located by Robert Auston and his partners. An additional 96 claims were located in the vicinity, 32 being located for Newkirk Mining Corporation Limited, 32 for Conwest Explorations Limited, and 32 for G.F. Dickson.

Prospectors Airways, Limited also had 80 claims staked on base metal occurrences in the Kathleen Lakes area. An additional 40 claims were staked in the area by individuals. Forty claims were staked for the company on Clarke Peak southeast of Mayo, reportedly due to the similarity between certain geological features on the claims, and those at the company's base metal property at Vangorda Creek. Twenty-seven claims were staked adjacent to the Prospectors Airways Limited claims on Clarke Peak.

A group of 32 claims was staked by Northwest Exploration, Limited at the head of Parent Creek, a tributary of Duncan Creek. The claims were staked as a result of Dr. R.W. Boyle's geochemical report on the area, published by the Geological Survey of Canada as Bulletin 32. An additional 40 claims were staked in the area by individuals.

Ankeno Mines, Limited

Ankeno Mines Limited, which suspended operations in 1953, applied for leases on 18 claims. The company changed its name to Bankeno Mines Limited during the year.

Bellekeno Mines, Limited

This company suspended mining operations on September 30th, 1954, after running out of ore. The ore mined was processed at the Mackeno Mines, Limited mill. There were 4,062 tons of ore milled, from which 564.62 tons of concentrate containing 171,352.57 ounces of silver, and 507,338 pounds of lead were produced. Bellekeno Mines, Limited had 12 employees.

Comstock Keno Mines, Limited

Comstock Keno Mines, Limited operated with a crew of eight men from May 1st to October 30th, in 1954. Work done was confined almost solely to the Gold Star claim. A cross-cut of 303 feet was driven to test the vein exposed on surface in 1953. It disclosed a well mineralized vein, about 160 feet below outcrop. The vein was then explored by 299 feet of drifting and 167 feet of raising. The lateral work disclosed one length of ore averaging 45.9 ounces of silver per ton and 12.8 percent lead over a four foot width for 100 feet, and a second length of 110 feet averaging 44.0 ounces of silver per ton and 8.1 percent lead over a width of 4.0 feet. Diagonal raising showed the first shoot to have a horizontal length of 80 feet at an elevation of 75 feet above the back of the drift and an average of 58.6 ounces of silver per ton and 28.4 percent lead over a width of 4.0 feet. It was reasonably certain that the first ore shoot to an elevation of 110 feet above the drift contained about 4,000 tons of ore averaging 51.7 ounces of silver per ton and 19.7 percent lead. This vein was a continuation of the Porcupine vein. The logical method of extracting the proven ore and of doing further development was by drifting along the vein from the Porcupine adit, 186 feet lower in elevation than the Comstock adit. Negotiations were entered into with United Keno Hill Mines Limited, owners of the Porcupine claim, with the object of engaging in a joint effort. These negotiations failed, and as a result Comstock did not plan on doing any work on its claims in 1955.

Klondike Keno Mines, Limited

Klondike Keno Mines, Limited changed its name to Jaye Explorations Limited in 1954. It allowed 80 claims to lapse, and retained only four fractional claims on Keno Hill.

Mackeno Mines, Limited

Mackeno Mines, Limited operated throughout 1954. In the course of mining and development work, 2,544 feet of drifting and cross-cutting, 924 feet of raising, and 1,411 feet of diamond drilling were completed A winze was sunk 200 feet, and a fourth level was opened.

During the year, the mine was expanded. This included the erection of a 48 man bunkhouse and additions to the dry and cookery. A new diesel generator and compressor was installed, and an oil-fired central heating system was put in operation.

A total of 22,526.72 tons of ore with an average grade of 43.58 ounces of silver per ton, 9.69 percent lead, and 5.71 percent zinc were included in the 25,393.00 tons of material mined in 1954. There were 22,526.08 tons of ore milled, from which 3,527.2 tons of silver-lead concentrate, and 1,632.2 tons of zinc-cadmium concentrate were produced. The concentrate contained 986,848.49 ounces of silver, 4,501,674.01 pounds of lead, 2,037,096.27 pounds of zinc, 7,714.59 pounds of cadmium, and 71.406 ounces of gold.

Mount Keno Mines, Limited

Mount Keno Mines, Limited was again inactive during 1954. Silden Mines, Limited, a private company formed by J.J. Hogan and J.R.O. Walli mined on the property under a lease agreement during the year. They began mining about March 1st, and produced 150 tons of high-grade shipping ore, and 1,162 tons of crude ore. The crude ore was processed at the Mackeno mill, and 77.4 tons of concentrates were recovered. All mining was done on the Greta claim. J.J. Hogan was formerly mine manager for Mount Keno Mines, Limited. and J.R.O. Walli was formerly mine manager for Klondike Keno Mines Limited.

United Keno Hill Mines, Limited

United Keno Hill Mines, Limited completed another successful year, with production again increased from the previous year. Mining and development work was carried out at several properties. The main underground work was done at the Calumet mine, in order to develop ore reserves. Ore reserves, not including those at the Onek Mine, totalled 616,868 tons with an average grade of 38.2 ounces of silver per ton, 8.8% lead, and 7.7% zinc. Reserves at the Onek Mine were

123,491 tons with an average grade of 10.27 ounces of silver per ton, 4.4% lead, and 13.0% zinc.

Construction work was done at several sites in 1954. The Hector-Calumet camp was enlarged by the addition of one residence, one bunkhouse and the addition of 12 rooms below an existing bunkhouse. A new boiler plant was constructed, consisting of one new 150 h.p. boiler and a 100 h.p. boiler transferred from Onek Mine. A recreation hall being financed by the Elsa-Calumet Employees' Club was begun. One residence and one bunkhouse were moved from the Onek Mine to Elsa.

Development work and mining were done at the Hector and Calumet Mines throughout the year. At the Hector, mining in the wide section of ore in the No. 3 and No. 3-A veins between the 400 and 900 levels confirmed the tonnage and grade calculated from development work. Cross-cutting to explore the veins in the footwall of the Hector fault was completed, and development was carried out on these veins on the 525, 650, 775 and 900 levels. Development work on the No. 1 vein structure on these levels included 1,392 feet of drifting, of which 36.3% was in ore averaging 36.5 ozs. silver per ton across an average width of 6.3 feet. Development of the No. 2 vein structure on the 300, 400, 525 and 900 levels included 427 feet of drifting, of which 41.1% was in ore averaging 39.4 ozs. silver per ton across an average width of 5.5 feet.

During the year, the internal shaft was deepened 414 feet and stations for new levels were established at 1040 ft., 1165 ft., and 1300 ft. The ore loading pocket was being installed at the year end and the ore passes were being driven.

Operations at the Calumet Mine were confined to exploration on the No. 1 and No. 2 vein structures on all levels from the 100 level to the 900 level. Drifting on the No. 1 vein structure on the 100, 300, 525, 650 and 775 levels totalled 1,175 feet of which 65.7% was in ore averaging 44.4 ozs. silver per ton over an average width of 7.5 feet. Drifting on the No. 2 vein structure on the 525 and 900 levels totalled 620 feet, of which 62.6% was in ore averaging 31.3 ozs. silver per ton over an average width of 5.5 feet. Diamond drilling of the No. 1 vein structure at the north end of the 400 level further explored the previously located hanging wall ore section.

No work was done at the No Cash Mine and the Onek Mine during 1954. There was also no work done on the Bermingham Mine during the year, except the recovery of a small tonnage of dump ore.

Exploration of the Shamrock Mine on Keno Hill was commenced in June, 1954. An adit was driven to intersect the vein structure 200 feet below the outcrop, and 100 feet below the old workings. A total of 958 feet of lateral work was done, including 462 feet of drifting in the vein structure. The last 85 feet of drifting was in good ore averaging 70 ozs. of silver per ton, and 20% lead over an average width of three feet, with the face in ore of similar character when work was interrupted by winter weather conditions. This property supported a successful hand-mining operation about 1925.

The company had an average of 533 employees throughout the year. The raw tonnage mined was 175,653 tons, from which 41,143.88 tons of concentrate were produced. The concentrates contained 6,002,069.58 ounces of silver, 28,055,194.7 pounds of lead, 26,054,544.1 pounds of zinc, and 311,075.93 pounds of cadmium.

Yukeno Mines Limited

Only essential representation work was done on the company's property during 1954. Development work was terminated on July 20th, 1953.

Other Lode Operations

The former Whitemetals Yukon Limited's group of claims on Stand-to Mountain was re-located, and two years' worth of assessment work was performed on it. Whitemetals Yukon Limited's claims on Rambler Hill were also re-located, and also had two years representation work performed on them. Rambler Enterprise Mines Limited had two years representation work performed on its property, as well.

WHITEHORSE DISTRICT

Lode prospecting in the Whitehorse District continued to be very active during 1954. Work was done in the Quill Creek and White River areas, and in the Vangorda Creek area. A relatively high-grade deposit of silver-lead-zinc ore was also found in the Ketza River area, where approximately 400 claims were recorded. Several other interesting new discoveries were made, including gypsum and asbestos in the St. Elias area, asbestos in the Ketza River area, and base metals in the Coal River area.

Underground development work was continued at the Hudson Bay Exploration and Development Company, Limited Quill Creek property. Work on the company's MacMillan Pass area Tom lead-zinc-silver occurrence proved-up an estimated 10,000,000 tons of ore.

Prospectors Airways, Limited was engaged in diamond drilling the original discovery occurrence and adjoining ground at their Vangorda Creek lead-zinc property.

Conwest Explorations, Limited carried out geophysical surveys on silver-gold prospects in the Mount Freegold area.

A number of other companies, including American Smelting and Refining Company, Teck Exploration, Limited, Canalask Nickel Mines, Limited, and Brikon Explorations, Limited carried on with their prospecting and exploration work.

The Yukon Coal Company produced 11,800 tons of coal from its Tantalus Butte Mine near Carmacks.

PLACER MINING

The total amount of gold recovered in the territory in 1954 on which royalty export tax was paid was approximately 102,765 troy ounces produced as follows: Approximately 97,180 ounces, Dawson District, 2,750 ounces, Mayo District, and 2,835 ounces, Whitehorse District. The 24% increase in production in the territory during 1954 over the year previous resulted from a 41% increase in production over the same period by Yukon Consolidated Gold Corporation. The company had one small dredge more in operation in 1954 than in 1953, and also had a dredging season of about 10 days longer than normal. The company produced 53% of the gold recovered in the territory during the year.

There were 147 new and restaked claims recorded during the year, and 847 claims were renewed.

DAWSON DISTRICT

There were 104 new, and 17 restaked placer claims recorded in the Dawson District in 1954, and 689 claims were renewed.

The mining season during 1954, was extremely dry, and general water shortages resulted. Snowfall during the winter of 1953-1954 was near average, but rainfall between May 1st and September 30th was less than average. The weather was generally cool and cloudy, with temperatures lower, and relative humidities higher than normal. Winds of over 10 m.p.h. occurred on 120 days during the year, much higher than the seven-year average of 73 days.

Despite the dry season, gold production in 1954 exceeded that of 1953. The largest part of the production came from Yukon Consolidated Gold Corporation, Limited. Many of the smaller companies and individual miners had significantly lower gold productions than normal due to extreme water shortage throughout the season.

Yukon Consolidated Gold Corporation, Limited

Property

The company maintained in good standing titles to all property deemed necessary to the pursuance of its mining operations, including hydraulic leases, placer mining claims, and water rights during 1954.

Power Generation and Transmission

The hydro-electric power plant, located on the Upper Klondike River, operated throughout the year without serious interruptions, and furnished adequate power for all of the company's operations. The total of kilowatt-hours generated was 31,230,800. The amount used by the mining company was 20,993,900 kilowatt-hours, or 67.2% of the output of the plant. The amount sold to the Dawson Electric Light and Power Company, Limited for distribution in the City of Dawson was 6,391,400 kilowatt-hours, or 20.5% of the plant output. There were 1,407,800 kilowatt-hours, or 4.5% used by the power plant, and 2,437,700 kilowatt-hours, or 7.8% were absorbed by transmission line and transformer losses. The cost of generation per kilowatt-hour sold and distributed, was .336¢. The total cost of generation and transmission was $104,838.40.

Hydraulic Stripping

Hydraulic stripping of muck overburden was carried out at operations Nos. 6, 8, 9, 10, 11 and 12 throughout the season. The results of the stripping are as follows.

Area No.	Location	Operating Dates		Water Season Days	Water Used M.I.D.	Cu. Yds. Removed	Duty
		Started	Ended				
6	Granville	May 15	Sept. 20	128	18,093	258,153	14.27
8	Middle Sulphur	May 15	Sept. 22	130	41,601	526,126	12.65
9	Upper Sulphur	May 15	Sept. 26	134	26,441	374,072	14.15
10	Middle Dominion	May 14	Sept. 29	137	27,751	223,051	8.03
11	Middle Hunker	May 15	Sept. 30	138	32,554	213,528	6.56
12	Dominion Benches (Jensen)	May 14	Sept. 30	138	11,693	134,007	11.46
				134	158,133	1,728,937	10.93

The total cost of the stripping was $260,406.14, or 15.06 cents per cubic yard.

Cold Water Thawing

Artificial thawing operations, using water at natural temperatures under pressure were conducted at three places during 1954, with the following results.

No.	Location	Operating Dates Started	Operating Dates Ended	Water Season Days	Cu. Yds. Thawed
8	Middle Sulphur	May 10	Sept. 19	131	1,350,822
9	Upper Sulphur	May 16	Sept. 19	125	612,815
11	Middle Hunker	May 15	Sept. 20	127	1,079,141
				128	3,042,778

The costs of thawing operations totalled $159,622.07, or 5.25 cents per cubic yard.

Dredging

The company operated 7 dredges during the season. The total number of dredge days was 1,386 or an average of 198 days for each dredge. The dredging season was 8 to 10 days longer than usual.

The season began on May 1st, when dredge No. 9, on Sulphur Creek started and continued to December 2nd when dredge No. 4, on Bonanza Creek, and dredge No. 8, on Lower Sulphur Creek, ceased operations. Dredge No. 12, which was purchased from the Boundary Dredging Company in Alaska for use on Dominion Creek benches, started work on the left limit of Dominion Creek on May 26th, and operated until October 25th. A summary of the 1954 dredging operations is below.

Dredge No.	Location	Bucket Size Cu. Ft.	Operating Dates Started	Operating Dates Ended	No. Days Operations	Cu. Yds. Dredged
4	Bonanza	16	May 11	Dec. 2	205	1,414,130
6	Granville	7	May 6	Dec. 1	209	900,768
8	Lower Sulphur	7	May 5	Dec. 2	211	731,082
9	Upper Sulphur	5 3/4	May 1	Nov. 10	193	552,056
10	Middle Dominion	7	May 6	Nov. 27	205	649,601
11	Hunker	7	May 4	Dec. 1	211	716,016
12	Jensen	2 1/2	May 26	Oct. 25	152	152,162
					198	5,115,815

Hydraulic Mining

The hydraulic operation on Paradise Hill, on the left limit bench opposite Claim No. 65 below discovery on Hunker Creek, was continued. A five-stage centrifugal pump was installed, which was capable of delivering 400 miner's inches of water at a satisfactory working pressure on bedrock. A total of 186,026 cubic yards of gravel and bedrock was handled.

Hydraulic Operation No. 13	Location	Operating Dates Started	Operating Dates Ended	No. Days Operation	Cu. Yds. Mined
No. 13	Paradise Hill Hunker L.L.	May 19	Sept. 30	135	186.026

Production

The total production for 1954 was 54,257.036 fine ounces of gold and 11,079.94 ounces of silver, for which the company received a total of $1,854,073.60, representing an average value of 34.97¢ per cubic yard, or an average grade of approximately 0.012 crude ounces of gold per cubic yard mined. The 1954 production was significantly higher than the 1953 production, which was valued at $1,309,106.00.

Shops and Transportation

The machine shop, electrical repair shop, and automotive repair garage, all located at Bear Creek, and other repair facilities were operated for the maintenance and repair of all company machinery and equipment.

The freighting of supplies was done under contract with McCormick Transportation Company, except that the material being shipped in from Vancouver was freighted from Whitehorse by the White Pass and Yukon Route.

Employment

As in former years, arrangements were made with the National Employment Service to supply all labour requirements. The average number of employed during the year, by months, was as follows.

January	51	July	373
February	65	August	354
March	76	September	330
April	237	October	209
May	428	November	204
June	403	December	77

Peak employment was from May 1st to 8th, at which time 437 men were employed. A total of 87,240 man shifts were worked. The total cash expenditure for wages and salaries was $1,166,346.37.

Miscellaneous Expenditures

Equipment and supplies not purchased locally amounted to $184,407.33, on which freight charges of $40,237.87 were paid. Local purchases amounted to $132,351.40.

Yukon Placer Mining Company

Yukon Placer Mining Company commenced preliminary operations on their Big Gold Creek properties at the mouth of Glacier Creek on April 20th. Dredging with the 3.75 cubic foot bucket-line dredge began June 2nd, and continued until October 16th. Two D-7 Caterpillar bulldozers and a pumping unit were used for stripping ahead of the dredge.

Open-cut mining began May 30th, and continued until September 26th. Three D-8 Caterpillar bulldozers and a pumping unit were used in the sluicing operation. One D-4 Caterpillar bulldozer, and a drill were used in a drilling program.

Production for the year was 9,432.79 fine ounces of gold and 1,543.65 fine ounces of silver valued at $321,914.96. Mining conditions were fair, although extremely dry fall weather resulted in a water shortage. The crew of 30 employees closed camp for the season on October 17th.

Clear Creek Placers, Limited

Clear Creek Placers, Limited started dredging on June 5th, and stopped mining on October 3rd. The dredge mined and processed 202,000 cubic yards of material, from which 2,368.94 fine ounces of gold valued approximately $83,200.00 were recovered. The gravel processed had an average recovery of 0.014 crude ounces of gold per cubic yard, or a value of 40.5 cents per cubic yard. Ground preparation work sufficient to meet dredging requirements for the 1955 season was also done. The company had 19 employees, with a payroll amounting to $50,000.00.

Yukon Gold Placers, Limited

Yukon Gold Placers, Limited continued to work on claims on Henderson Creek leased from the Yukon Consolidated Gold Corporation, Limited. During 1954, their dredge mined and processed 266,900 yards of material, an average of 1,960 cubic yards per day of the 136 day operating season. There were 3,995.73 fine ounces of gold recovered from the material processed, which had an average recovery rate of 0.015 fine ounces per cubic yard. Ground preparation work sufficient to meet dredging requirements for 1955 and part of 1956 was also done. The company had an average of 18 employees, with a payroll of $46,000.00.

Since the White Pass and Yukon Route had withdrawn their steamers from the Yukon River, the company was forced to have its diesel oil and other supplies delivered to the river bank at Minto, some 135 miles from Henderson Creek, and to then hire a local freighter to bring the supplies to Henderson Creek Landing. From Henderson Creek Landing, the company hauled the supplies 18 miles to its camp. The local freighter was not always available, and the arrangement caused the company some problems including having to carry a large inventory of diesel oil.

Yukon Gold Placers, Limited did not mine on its Thistle Creek property, although it continued to hold the property through assessment work which was done previously.

Other Placer Operations

Terra Mines, Limited continued their bulldozer and sluicing operation on Little Gold Creek during 1954. They operated from April 20th to October 15th with 2 D-6 Caterpillar bulldozers, and 4 employees, and recovered 1,256.75 fine ounces of gold.

Messrs. H.D. and D.F. Boutillier ran their hydraulic operation on Adams Gulch from March 25th to September 30th. As usual, they performed all work themselves, without hired help. They recovered 82.32 fine ounces of gold, approximately half their usual recovery. The low recovery was due to the most extreme scarcity of water the brothers had experienced in any mining season.

R.E. Troberg worked alone on his Bonanza Creek claim from April 15th to October 1st. His production was 56 ounces of gold, which was approximately half his usual production.

Mr. B. Bratsberg continued his very successful operation on Gold Bottom Creek during 1954. Working with one employee, and using one D-8 Caterpillar bulldozer and sluices, he mined from June 1st to September 15th, and recovered 1,300 ounces of gold.

Mr. G. Shaw mined on Gold Bottom Creek below Mr. Bratsberg's operation, with one employee. They operated with one D-7 and one D-8 Caterpillar bulldozer between June 1st and October 15th. They processed 30,000 cubic yards of material, from which they recovered 500.60 fine ounces of gold, or 0.017 fine ounces per cubic yard.

Mr. J. Bremner and his son, with one employee ran their hydraulic operation on a Last Chance Creek bench from April 1st to October 12th. They recovered only 52.60 fine ounces of gold, due to the very dry conditions they experienced.

Mr. R.S. Gould, and his son J.A. Gould operated on Hunker Creek and on Last Chance Creek using hydraulic methods and one bulldozer. They mined from April 1st to October 15th, but recovered only 46 ounces of gold from both operations due to the shortage of water.

Northern Placers, Limited operated from May 14th to October 4th on leased ground on Adams Gulch, using a dragline, two TD-18 International bulldozers, and sluices. With a crew of five men, they recovered 1,046.95 fine ounces of gold valued at $40,000.00. The water shortage resulted in a $12,000.00 decrease in the value of production from 1953.

Messrs. A.T. Fry and his son operated on Monte Cristo Gulch, Bonanza Creek, from April 15th to July 15th, at which time their water supply ran out. They mined using one TD-40 International bulldozer, sluices, and hydraulic methods, and recovered 62.49 fine ounces of gold. From July 15th to October 10th, they worked with the bulldozer and sluices on a leased property on Hunker Creek, and recovered 165.71 fine ounces of gold.

Brewis Red Lake Mines, Limited carried out no mining during the 1954 season. They allowed two prospecting leases (10 miles) to lapse on All Gold Creek, but applied assessment work previously done to keep 11 claims in good standing on the creek.

Messrs. M.D. and L.G. Cole and two employees operated using one D-6 Caterpillar bulldozer and hydraulic methods at the mouth of Gauvin Gulch, Bonanza Creek, from April 15th to October 25th. They mined an area of approximately 10,000 bedrock square feet, and recovered 130.67 fine ounces of gold. Their production was curtailed due to extremely dry weather. During July and August, only enough water was available for one hour and twenty minutes sluicing per day. Most of the season was devoted to "dead work", such as enlarging their reservoir, replacing three flumes with a ditchline, and constructing a new intake dam at the head of the ditch. In the spring and fall considerable ground was stripped by hydraulic methods in preparation for mining in 1955.

E. Schink and one employee mined on claims on the hillside of Hester and Hunker Creeks held by Mr. Schink and J.R. Colbourne. They worked from May 1st to September 30th, using a bulldozer and hydraulic methods, and recovered 80 ounces of gold. A large part of the season was used in building a new water reservoir, and in repairing the ditch in preparation for a larger scale operation. The lack of water for sluicing also affected the 1954 work.

Mr. J. Castonguay with one employee began mining in 1954 on leased property on Caribou Creek. They worked from July 1st to October 10th with a bulldozer and sluices. Although they had only four days' water for sluicing, they recovered 92 ounces of gold.

Adolphe and Alcide Coulombe transferred their D-4 Caterpillar bulldozer and hydraulic equipment from their former mining camp on Ballarat Creek to a leased property on Ready Bullion Creek, where they operated from June 30th to October 15th. They recovered 52 ounces of gold. Ground preparation work for the 1955 season was also done.

Ballarat Mines, Limited began work on their property on the lower part of Ballarat Creek on April 18th, and began open-cut mining on July 17th. Mining continued until September 22nd, and the camp was closed on September 23th. Three D-8 Caterpillar bulldozers and a sluicing outfit including International pumping unit were used. There were 1,325.69 fine ounces of gold and 179.83 fine ounces of silver, valued at $45,138.58 recovered. The extremely dry season necessitated returning sluicing water by pumping. There were five employees at the operation.

George Fant and Ivor Norbeck operated on Scroggie Creek with one bulldozer and sluices from June 5th to September 20th. They recovered 310.47 fine ounces of gold. Their water supply was fair, although poorer than in 1953. Two weeks were spent stripping ground in preparation for mining in 1955.

Messrs. Ole Medby and Jos. Lamontagne worked on Hydraulic Lease #46 on Miller Creek under agreemnet with the owner, T.P. Campbell. They began work on the property in 1951, and spent most of the 1951, 1952, and 1953 seasons stripping and otherwise preparing the property for mining. Nevertheless, they recovered gold valued at approximately $30,000.00 during each of those years. Their 1954 season began May 1st, and ended October 1st. Three D-6 Caterpillar bulldozers and sluices were used. A G.M.C. Twin 71, 360 H.P. pump was used to pump all water used. Gold production during 1954 was valued at $45,000.00.

W.F. Morgan operated from June 1st to September 15th on Moose Creek, a tributary of the Fortymile River. He used one D-6 and one D-7 Caterpillar bulldozers, and sluices, and operated with four employees during the season. They recovered 200 ounces of gold. There was a good supply of water at the beginning of the season, but little to no water at the end. The operation was not profitable, and there were no plans to continue it in 1955.

Very few of the pioneer miners of the Gold Rush days mined in 1954. Several died during the year, and others retired from active mining and sold, or optioned their properties.

MAYO DISTRICT

Two new placer claims were issued in the Mayo District during 1954, and 76 claims were renewed. There were 95 claims in good standing. Placer mining activity continued at a low level. Approximately 2,750 ounces of gold were recovered during the year. Little prospecting for placer deposits was done.

No mining was done on the Middlecoff ground on Highet Creek, although the estate of Mr. Middlecoff kept the property in good standing.

Waddco Placers Limited continued work on Haggart Creek with a crew of 3 to 5 men. Early in the 1954 season, parts of the property were drilled to evaluate their potential. The company recovered 1,956.98 fine ounces of gold.

Mr. Fred Taylor worked alone on his Haggart Creek property, using a bulldozer. He recovered 451 ounces of gold.

Ellis Johnson worked on some old placer workings on Davidson Creek, and recovered five ounces of gold.

WHITEHORSE DISTRICT

There were 24 new placer claims issued, and 87 claims were renewed. Forty-five new prospecting leases were issued, and four leases were renewed. There was a flurry of staking activity during the summer along the Liard River between the Alaska Highway and the Frances River, and great interest was shown in the black sands of the area.

The established operators continued to mine during 1954. Burwash Mining Company operated on Burwash Creek, and recovered 499.20 fine ounces of gold. Kluane Dredging Company mined on Gladstone Creek, and recovered 1,645.47 fine ounces of gold. Placer gold production from the Whitehorse District during 1954 totalled 2,835 ounces.

CHAPTER 16.

MINERAL INDUSTRY OF YUKON, 1955

INTRODUCTION

Reports by F.H. Collins, Commissioner, G.A. McIntyre, Mayo Mining Recorder, W.M. Emery, Whitehorse Mining Recorder and the Dawson Mining Recorder were used in compiling information on the mineral industry in Yukon in 1955.

LODE MINING

Lode prospecting increased in the Dawson District during 1955. Large groups of claims were staked in the Barlow, Miller, and Cassiar Creeks areas. Prospecting and mining activity decreased in the Mayo District during the year, after disappointing results were obtained from 1954 prospecting work, and some of the mining operations in the Mayo area were closed. Prospecting activity increased in the Whitehorse District in 1955, and development work on various properties continued.

There were 320 new lode claims recorded, and 67 claims were renewed in the Dawson District during the year. There were 374 claims in good standing at the end of the fiscal year. In the Mayo area, 257 new claims were recorded and 1,092 claims were renewed. There were 1,474 quartz claims, and 213 quartz leases in good standing at the end of the fiscal year. There were 2,127 new claims recorded, and 3,062 claims were renewed in the Whitehorse District during the year.

Changes in the Mining District boundaries were put into effect late in 1955.

Production from lode mining operations in the Elsa-Keno Hill area in 1955 totalled 43,561.3 tons of concentrate containing 26,911,614 pounds of lead, 5,866,716 ounces of silver, 24,845,629 pounds of zinc, 309,366 pounds of cadmium, and 61.3 ounces of gold. A small additional tonnage of high grade ore may have been mined by laymen.

Yukon Coal Company mined 11,210.4 tons of coal from its Tantalus Mine near Carmacks.

DAWSON DISTRICT

There was no lode mining done in the Dawson District during 1955. Some prospecting was done, and several large groups of claims were staked. Oil exploration was carried out in the Peel and Porcupine Rivers areas by Peel Plateau Exploration Company, which fielded a crew of about fourteen employees.

Mr. J. Meloy continued to hold his 16 claims covering a silver-lead-tungsten occurrence on Casino Creek. This property was transferred to the Whitehorse District with the change in district boundaries.

No development work was done on the group of asbestos claims on Thomas Gulch, or on the fluorite prospect on Matson Creek held by Messrs. J. Sestak and F. Caley, although the claims were kept in good standing.

There were 103 claims staked in the Cassiar Creek area, a tributary on the left limit of the Yukon River, about 37 miles below Dawson. The claims centred around an asbestos find on Cassiar Creek made by Mr. F. Caley and four associates. Conwest Explorations, Limited took out an option for $50,000.00 on 36 claims held by Mr. Caley et al, and carried out some exploration work during the fall. The discovery appeared to be the most promising one found in the Dawson District for many years.

Twenty claims were staked in a group over a silver-lead prospect on Miller Creek. Traces of this type of ore were known in the area for many years, but no mining on the occurrences was done.

Near the mouth of Barlow Creek on Clear Creek, approximately 70 miles from Dawson, 147 quartz claims were staked. The staking was a result of scintillometer readings taken in a small canyon in the area, but apparently no radioactive mineralization was found and the claims were not optioned or explored.

No development work was done on the group of 16 claims covering the copper prospect on Gold Bottom Creek, although the property was still in good standing. A group of 8 claims was staked on the ridge between Carmacks Fork of Bonanza Creek, and West Gold Bottom Creek over another copper prospect known as the "Boxcar" occurrence.

The remainder of the lode claims in the Dawson District were widely scattered. Most covered occurrences which were known for many years.

MAYO DISTRICT

Mineral exploration and development, and mining in the Mayo District suffered set-backs during 1955. A flurry of staking activity followed the release of Dr. Boyle's geochemical report as Geological Survey of Canada Bulletin 32, but subsequent prospecting failed to disclose anything but confirmation of his water analyses.

The results of prospecting following claim staking in the Kathleen Lakes, Worm Lake, and Clarke Hills areas were negative, and all but 4 of the 307 claims staked in 1954 were allowed to lapse. The source of the high-grade float which led to the winter staking in the Worm Lake area was traced to small veinlets of no commercial importance.

Mackeno Mines, Limited was forced to close its mill because of a lack of mill feed, and production at United Keno Hill Mines, Limited decreased slightly from previous years.

One good prospect was developed during the year. Howard Colley and John Gerlitzki opened up what promised to be a new ore zone about one mile northwest of the Silver King Mine in the Galena Creek Area, Galena Hill. United Keno Hill Mines Ltd. optioned the Colley interest for $60,000.00, while Gerlitzki optioned a one quarter interest to T.C. Richards, of Whitehorse, Y.T., for $50,000.00.

Mackeno Mines, Limited

Mackeno Mines, Limited operated throughout the year. An intensive development program was carried out, including 434.5 feet of drifting and cross-cutting, 695.5 feet of raising, and the extension of No. 2 winze from 208 to 395 feet. There were no new installations during the year, and no new buildings.

The mill was closed in January to allow the development program to be carried out. It resumed operation in September, but was forced to close again on October 31st due to a lack of mill feed.

During 1955, there were 5,567 tons of ore mined, from which 662.17 tons of lead concentrates and 496.32 tons of zinc concentrates were produced. The lead concentrate contained 839,458 pounds of lead, 112,680 pounds of zinc, 152,753.0 ounces of silver, and 37.82 ounces of gold. The zinc concentrates contained 34,155 pounds of lead, 504,360 pounds of zinc, 8,065 pounds of cadmium, 11,758 ounces of silver, and 23.5 ounces of gold. The company shipped 1,161.89 tons of lead concentrates and 730.32 tons of zinc concentrates to the smelter.

The company planned to continue development work in the mine in an attempt to provide sufficient ore to keep its mill operating.

Mount Keno Mines, Limited

Mount Keno Mines, Limited was inactive during 1955. Sidlen Mines, Limited, a private company, operated on Mount Keno's property under a lease agreement. However, they terminated their agreement during the fall. Further work on the property was not planned.

United Keno Hill Mines, Limited

United Keno Hill Mines, Limited completed another successful year. Production was not as high as in 1954, but more efficient mining and processing methods resulted in increased profits. The main underground work was done at the Hector and Calumet Mines. Ore reserves, not including those at the Onek Mine, totalled 587,830 tons with an average grade of 37.7 ounces of silver per ton, 8.7% lead, and 8.0% zinc at the end of the company's fiscal year. Reserves at the Onek Mine were 123,491 tons, with an average grade of 10.27 ounces of silver per ton, 4.4% lead, and 13.0% zinc.

Little new construction work was done during the year. The recreation hall at Calumet, and the curling rink at Elsa were completed. Experimental work was done with various types of containers suitable for holding concentrates during shipment, resulting in the adoption of a returnable plywood container of two tons capacity.

Development work and mining were done at the Hector and Calumet Mines throughout the year. At the Hector, 141,249 tons of ore were mined, of which 75.9% was handled through the internal shaft. The balance was mined from above the 400 level. Lateral development was largely directed to the No. 1 and No. 2 veins on the footwalls of the Hector Fault on the 650, 775, 900 and 1165 levels. Minor additional work was done on the No. 3 and No. 4 vein extensions. Development by drifting on the No. 1 vein structure on the 525, 650 and 900 levels totalled 399 feet of which 38.3% was in ore averaging 35.2 ounces silver per ton across an average width of 5.6 feet. On the 1165 level, the cross-cut was completed to the No. 1 vein. Drifting through the fault was completed, and driving to the 3 Zone was proceeding at the year end. Development by drifting on the No. 2 vein structure on the 100, 650 and 775 levels totalled 600 feet, of which 60.3% was in ore averaging 33.8 ounces silver per ton across an average width of 5.6 feet. An ore pass system from the 525 level to the 1165 was completed and placed in operation during the year, together with a loading pocket and skip-cage combinations.

Development work at the Calumet Mine continued throughout the year with exploration of the No. 1 and No. 2 vein structures on the 100, 300, 650, 775 and 900 levels. Drifting on the No. 1 vein structure on these levels totalled 1,700 feet, of which 26.1% was in ore averaging 47.5 ounces silver per ton across an average width of 6.2 feet. The percentage of drifting in ore was low due to a long drive on the 600 level through a barren area to the ore in the region of the Calumet winze. Drifting on the No. 2 vein structure on the 100, 650, 775 and 900 levels totalled 1,045 feet, of which 44.5% was in ore averaging 43.2 ounces silver per ton across an average width of 6.0 feet. Production at the Calumet Mine began on October 1st, at an average rate of 125 tons per day.

No work was done at the No Cash, Bermingham and Onek Mines during 1955. At the Elsa Mine, diamond drilling performed early in 1955 disclosed favorable indications of high grade ore. Work was started on exploration and development of two levels below the adit. A three compartment shaft was sunk 171 feet below the 400 level. Station cutting on the 525 level together with hoistroom and rope raise excavations were being carried on at the year end.

Exploration work at the Shamrock mine was resumed in June, 1955. A program of drifting, cross-cutting and raising totalling 958 feet was carried out, together with 621 feet of diamond drilling. The ore shoot developed in 1954 was extended to give a total length of 119 feet, which averaged 71.4 ounces silver and 22.0% lead across an average width of 3.0 feet. Limited raising and diamond drilling did not establish the vertical range of this ore shoot. Further drifting on the main vein, and on a parallel hanging wall structure did not develop further ore. Operations at the property were suspended at the end of September due to winter weather conditions.

Work was begun at the end of the year at the Ladue Mine. The low level adit was re-opened for access and examination of the old workings.

During the summer, geological parties mapped an area of approximately 1.75 square miles on Keno Hill, and slightly more than 5 square miles Galena Hill.

The company had an average of 476 employees during 1955. The raw tonnage mined was 155,754 tons, from which 42,502.76 tons of concentrate were produced. The concentrates contained 5,702,205.47 ounces of silver, 26,038,000.7 pounds of lead, 24,228,588.9 pounds of zinc, and 301,301.02 pounds of cadmium.

Other Lode Operations

J.J. Colt, and J.B. O'Neill held a block of 56 claims on Dublin Gulch. The claims covered old prospects which had been known since 1903. The prospects were covered by patented claims for many years, and only sufficient work was done on them to obtain patents. The patents were forfeited for non-payment of taxes, and the property was restaked.

E.H. Barker and associates held a group of 17 claims on Haggart Creek, opposite the mouth of Dublin Gulch. A great deal of work was done on the ground by a wing dam on Haggart Creek, which caused the creek to ground sluice the right limit of the creek and expose a great deal of bedrock. More work was done by bulldozer and ground-sluicing below the mouth of Dublin Gulch on the right limit of Haggart Creek. A large vein of sulphide minerals containing antimony with low values of silver and gold was exposed.

C. Poli exposed a vein on his property on Secret Creek similar to the one exposed on Haggart Creek. The Secret Creek property carried higher silver values, however.

Beaver River Silver-Lead Mines, Limited continued to hold claims in the Beaver River and Davidson Mountain areas, but did no work on either property during the year.

Bankeno Mines, Limited leased its group of 18 claims on Keno Hill in 1955, but no work was done on the property.

Bellekeno Mines, Limited changed its name to Consolidated Bellekeno Mines, Limited, and remained otherwise inactive.

Bibis Yukon Mines, Limited continued to hold a small group of claims near Faro Gulch on Keno Hill, but did no work on the property.

Brewis Yukon Mines, Limited, which changed its name to De Coursey Brewis Minerals, Limited was not active in 1955.

Comstock Keno Mines, Limited did no work on its promising ore zone on the Gold Star claim.

Jersey Yukon Mines, Limited had assessment work done on its claims on Galena Hill. The company held 41 claims.

Kenmayo Mines, Limited dropped all of its claims on the south slope of Keno Hill. The most promising ones were restaked, and were optioned to Silden Mines, Limited for $25,000.00.

Jaye Exploration, Limited retained only four fractional claims in its name, and continued to make small payments on the Bear-Milosevich property on the south slope of Keno Hill.

North Denison Mines, Limited changed its name to Consolidated Denison Mines, Limited, and retained its fourteen claims on Galena Hill.

Northwest Explorations, Limited dropped all but 7 of the 32 claims they had staked in 1954 at the head of Parent Creek after the release of Dr. Boyle's geochemical report. Work by the company confirmed Dr. Boyle's findings, but no mineralization could be found.

Packeno Mines, Limited continued to hold eleven claims just west of the Leo property on Galena Hill. The company acquired the property in 1950, and 1951, and did only assessment work on the claims.

Rambler Enterprise Mines, Limited kept their group of 30 claims on Rambler Hill in good standing in 1955 through assessment work done previously. No work of any kind was done on Rambler Hill in 1955.

Yukeno Mines suspended operations on its Formo property near Christal Creek in July 1953. Only essential assessment work was done on the property in 1954 and 1955.

WHITEHORSE DISTRICT

Prospecting activity in the Whitehorse District increased in 1955. The greatest staking activity occurred in the fall of the year along the Liard River, in the vicinity of Wasson Lake, and in February of 1956 on both shores of Lake Bennett.

The amount of development work done also increased in 1955. Many of the claims still in good standing had been held for three years, or the limit for the submission of preliminary exploratory work for assessment credit, necessitating a change in the type of work done for such credit.

The Yukon Coal Company produced 11,210.4 tons of coal from its Tantalus Butte Mine near Carmacks during 1955.

PLACER MINING

The total amount of gold recovered in the territory in 1955 on which royalty export tax was paid was 91,395.47 ounces produced as follows: 84,525.0 ounces, Dawson District, 5,124.9 ounces, Mayo District, and 1,745.6 ounces, Whitehorse District. Total production decreased 11% over 1954 production. Production of Yukon Consolidated Gold Corporation declined 8% over the year previous. In 1955, the company produced 55% of the placer gold recovered in the territory.

During 1955, 41 placer claims were staked or restaked, and 611 claims were renewed. There were at least 1,970 placer claims in good standing at the end of the fiscal year.

DAWSON DISTRICT

There were 15 new, and 7 restaked placer claims recorded in the Dawson District in 1955, and 486 claims were renewed. There were 1,824 placer claims in good standing in the district at the end of the fiscal year.

Although there was little run-off from snowfall from the winter of 1954-1955 because of a cool, dry, spring, the water supply for placer mining was good in 1955 when compared to the extremely short supply of 1954. The weather was cool and wet in August and September. Winter freeze-up was in October, somewhat earlier than usual.

Gold production from the Dawson District in 1955 was approximately 84,525 ounces.

Yukon Consolidated Gold Corporation, Limited

The company operated dredges No. 4, 6, 8, 9, 10, 11 and 12 on Bonanza, Lower Dominion, Lower Sulphur, Upper Sulphur, Middle Dominion, Hunker, and Jensen Creeks respectively during 1955. The dredging season began May 1st, and continued until November 15th. A total of 5,300,000 cubic yards of gravel and bedrock was dredged, from which approximately 44,725 fine ounces of gold valued at $1,525,000.00 were recovered. Dredging costs totalled $1,250,000.00, or 23.58 cents per cubic yard.

Hydraulic stripping removed 2,240,000 cubic yards of muck overburden at a cost of $247,000.00, or 11.03 cents per cubic yard, in preparation for dredging. Artificial thawing operations, using cold water under pressure, thawed 3,200,000 cubic yards. The thawing work cost $163,000.00, or 5.09 cents per cubic yard.

The hydraulic mining operation on Paradise Hill, on the left limit of Hunker Creek, was continued in 1955. A total of 165,000 cubic yards of gravel were moved by hydraulic forces at a cost of $111,000.00, or 67.27 cents per cubic yard. Approximately 5,150 fine ounces of gold valued at $175,000.00 were recovered.

The company's hydro-electric power plant, located on the Upper Klondike River, operated throughout the year. It generated 31,000,000 kilowatt-hours of electricity at a cost of $110,000.00, or 0.355 cents per kilowatt-hour.

The maximum number of employees during the year was 401. The company paid a total of $1,100,000.00 in wages and salaries.

Yukon Placer Mining Company

Yukon Placer Mining Company commenced preliminary operations on their Glacier Creek properties on April 20th. Dredging with the 3.75 cubic foot bucket-line dredge began June 2nd, and continued until October 13th. Two D-7 Caterpillar bulldozers and a G.M.C. pumping unit were used for stripping ahead of the dredge. Sluicing at the open-cut mining operation began on May 11th, and finished September 26th. Three D-8 Caterpillar bulldozers and a G.M.C. pumping unit were used in the sluicing operation. One D-4 Caterpillar bulldozer, and a drill were used in the drilling program.

Mining conditions were considered poor in 1955, as although the season was cold and wet, the water supply was inadequate for stripping. Production totalled 7,720.89 fine ounces of gold, and 1,274.32 fine ounces of silver with a total gross value of $268,302.88. Yukon Placer Mining Company had 28 employees during the season.

Clear Creek Placers, Limited

Clear Creek Placers, Limited opened their camp on Clear Creek on April 25th, and closed it October 1st. The dredge mined and processed 143,000 cubic yards of gravel, from which 1,417.40 fine ounces of gold valued at approximately $49,120.00 were recovered. The material mined and processed had an average recovery of 0.012 crude ounces of gold per cubic yard, or a value of 34.35 cents per cubic yard. Clear Creek Placers, Limited concluded that all the economic placer ground at its Clear Creek property had been mined, and ceased operations permanently at the end of the 1955 season. The company had an average of 19 employees, and a payroll of $45,000.00 during the year.

Yukon Gold Placers, Limited

Yukon Gold Placers, Limited continued to work on claims on Henderson Creek leased from the Yukon Consolidated Gold Corporation, Limited. Their 1955 operations began April 25th, and finished October 20th. During the season, 241,000 cubic yards of material were dredged and processed, from which 3,308.57 fine ounces of gold valued at approximately $113,500.00 were recovered. The material mined and processed had an average recovery rate of 0.019 crude ounces of gold per cubic yard, or a value of 47.1 cents per cubic yard. Ground preparation work sufficient to meet dredging requirements for 1956 was completed. The company had an average of 19 employees with a payroll of $60,000.00.

The company continued to hold its property on Thistle Creek, but carried out no operations on it during 1955.

Other Placer Operations

Terra Mines, Limited worked on their Little Gold Creek property during July and part of August during 1955.

Messrs. H.D. and D.F. Boutillier ran their hydraulic operations on Adams Gulch from March 28th to October 12th, and recovered 140.03 fine ounces of gold. Their water supply was fair in 1955, compared with extremely low in 1954.

R.E. Troberg worked alone on his Bonanza Creek claim using a bulldozer and hydraulic methods from April 13th to September 24th. He recovered only 40 ounces of gold. Although his water supply was the best he had had since 1949, his production was down because one of the Yukon Consolidated Gold Corporation, Limited dredges was digging through part of his ground, under lease, and he was held up due to the lack of a dumping ground for his hydraulic tailings.

Mr. B. Bratsberg, and one employee hired for one month, operated with one D-8 Caterpillar bulldozer and sluices on Gold Bottom Creek from June 1st to September 30th. He recovered 450 ounces of gold. A good part of his season was taken up with moving his camp three miles, and with ground preparation for future mining. His water supply was short in the spring, and good in the fall.

Mr. G. Shaw mined part-time on Gold Bottom Creek between June 15th and September 3rd. He worked alone, using one D-6 Caterpillar bulldozer, and sluiced in one open cut. He recovered 77 ounces of gold.

Mr. J. Bremner, his son, and one employee ran their hydraulic operation on a Last Chance Creek bench from April 15th to October 9th. They recovered 160 ounces of gold.

Mr. R.S. Gould, and his son J.A. Gould, operated on Hunker Creek using a bulldozer and hydraulic methods. They mined from April 1st to October 15th, with a fair water supply, and recovered 100 ounces of gold.

Northern Placers, Limited operated from April 15th to October 1st on leased ground on Adams Gulch, using a dragline, two TD-18 International bulldozers, and sluices. With a crew of 7 men, they recovered 2,050 ounces of gold. They experienced a shortage of water in mid-season.

Mr. A.T. Fry, and his son D.A. Fry mined from May 1st to September 30th. They worked for a short time in the spring on Monte Cristo Gulch, Bonanza Creek and recovered 10 ounces of gold. During the balance of the season, they worked on Hunker Creek where they mined an area of 18,000 bedrock square feet, and recovered 161.22 fine ounces of gold. Their water supply was normal.

De Coursey-Brewis Minerals, Limited, formerly Brewis Red Lake Mines, Limited gave a lease on their holdings on All Gold Creek to Northern Placers, Limited. Northern Placers, Limited stripped approximately one-half mile of ground in 1955, preparatory to mining operations in 1956.

Mr. L.D. Cole and one employee worked on Bonanza Creek at the mouth of Gauvin Gulch from April 15th to October 15th, using one D-6 Caterpillar bulldozer, and hydraulic mining methods. The operation had a good water supply, but was considerably hampered during the season through having to wait for parts to be shipped in for the bulldozer.

After several seasons of mostly preparatory work, E. Schink and two employees operated with two bulldozers and hydraulic methods from May 1st to September 25th on the hillside of Hunker and Hester Creeks. They removed and processed 25,000 cubic yards of material, and recovered 750 ounces of gold, or significantly more than the 80 ounces they recovered in 1954. The material processed had a recovery rate of 0.03 ounces of gold per cubic yard. Although the spring run-off of water at the property was very short, the operators were able to obtain enough water for 60 hours' sluicing every two weeks during the summer from the nearby hydraulic operation of Yukon Consolidated Gold Corporation, Limited.

Mr. J. Castonguay with one employee carried out open-cut mining and sluicing on a leased property on Caribou Creek from June 1st to October 1st during 1955. He had a normal water supply, and recovered 160 ounces of gold. However, Mr. Castonguay was convinced that the Caribou Creek placer deposits were not economic, and did not plan to work there during 1956.

Adolphe and Alcide Coulombe worked on Ready Bullion Creek and Bonanza Creek with one D-4 Caterpillar bulldozer, and hydraulic methods and sluices from May 9th to October 8th. They recovered 57.36 fine ounces of gold from Ready Bullion Creek, and did ground preparation work for the 1956 mining season on Bonanza Creek.

Ballarat Mines, Limited did not operate on Ballarat Creek in 1955, but leased the ground to an individual. There was no report concerning the lessee's operations. Ballarat Mines, Limited carried out an experimental operation on "Groetcher" Bench on the left limit of the Klondike River at its mouth, opposite Dawson City, from April 15th to September 26th. The company had prospected the ground in 1955, with a view to opening a sluicing or hydraulic operation. Three employees worked using 1 D-4, and 1 D-8 Caterpillar bulldozers, and power and pumping units. They recovered 520.997 fine ounces of gold, and 107.85 ounces of silver with a total gross value of $18,106.87. Mining conditions were poor due to the cold, wet weather. The company planned changes in the operation for the 1956 mining season.

George Fant and Ivor Norbeck operated on Scroggie Creek from April 15th to October 10th, using 1 bulldozer and sluices. They recovered 96.10 fine ounces of gold, and reported that although their water supply was plentiful, the ground was not worth working any longer, and the operation was being abandoned.

Messrs. O. Medby and J. Lamontagne worked Hydraulic Lease #46 on Miller Creek from April 6th to September 30th. With two employees, they used one D-4 and three D-6 Caterpillar bulldozers, one G.M.C. pump, and sluices, and recovered gold valued at between $30,000.00 and $40,000.00. One month of the season was spent preparing ground for 1956 operations.

A few individual miners, including a few of the pioneer miners of 1898, were scattered across the Klondike district engaged in small, hand mining operations. The production of these miners was small.

MAYO DISTRICT

Ten new placer claims were issued in the Mayo District during 1955, and 67 claims were renewed. There were 79 claims in good standing at the end of the fiscal year. Placer mining activity remained at a low level during the year, although the largest operation doubled its production. Approximately 5,125 ounces of gold were recovered in the district during the year.

Waddco Placers, Limited continued mining on Haggart Creek, with a crew of 5 to 6 men. A dragline was used to stack tailings at the operation. There were 4,490.85 ounces of gold recovered.

Fred Taylor operated during part of the season on his Dublin Gulch property, and recovered 433.45 ounces of gold.

Clifford Greig purchased approximately half of the Taylor ground on Dublin Gulch. He worked part of the season, using a D-2 Caterpillar tractor with highlift shovel and rock bucket. He recovered 176.95 ounces of gold.

WHITEHORSE DISTRICT

There were 9 new placer claims issued, and 58 claims were renewed during the year. Twelve prospecting leases covering 37 miles were issued, and eight leases covering 12 miles were renewed. Prospecting and mining activity in the district remained at approximately the same level as in 1954. Gold recovery for the year decreased by more than 1,000 ounces to 1,745.57 ounces.

Burwash Mining Company continued work on Burwash Creek, and recovered 442.91 fine ounces of gold. Kluane Dredging Company continued work on Gladstone Creek. Production from both operations was lower than in previous years. Activity was renewed at Canadian Creek, and small operations were carried out on Sugden and Bullion Creeks. Recoveries from the various creeks were as follows.

Burwash Creek	587.56 oz.
Gladstone Creek	795.30 oz.
Canadian Creek	207.76 oz.
Sugden Creek	122.95 oz.
Bullion Creek	13.85 oz.
Miscellaneous	18.15 oz.
Total	1,745.57 oz.

CHAPTER 17.

MINERAL INDUSTRY OF YUKON, 1956

INTRODUCTION

Information on the mineral industry in Yukon during 1956 was compiled from reports by F. H. Collins, Commissioner, G.A. McIntyre, Mayo Mining Recorder, and W. M. Emery, Whitehorse Mining Recorder. Additional information was compiled from correspondence of H. Falding, manager of Yukon Gold Placers, and from publications of the Emergency Gold Mining Assistance Act.

LODE MINING

Lode prospecting activity increased in the Dawson District during 1956, mainly in response to the discovery of promising asbestos occurrences. Prospecting and property development work remained at a low level in the Mayo District during the year, but production continued at United Keno Hill Mines, Limited properties, and was resumed at the Mackeno Mines, Limited property. Prospecting and mineral development activity decreased dramatically in the Whitehorse District during 1956.

There were 219 new lode claims recorded, and 125 claims were renewed in the Dawson District. There were 346 claims in good standing at the end of the fiscal year. In the Mayo District, 215 new claims were recorded, and 551 claims were renewed. There were 1,380 quartz claims, and 257 quartz leases in good standing at the end of the fiscal year. There were 818 new claims recorded, and 1,862 claims were renewed in the Whitehorse District during the year, many fewer than the 2,127 new and 3,062 renewed claims of 1955.

Production from lode mining operations in the Elsa-Keno Hill area during 1956 totalled 45,030.4 tons of concentrate containing 28,567,586 pounds of lead, 6,758,260 ounces of silver, 25,658,698 pounds of zinc, 336,598 pounds of cadmium, and 49.4 ounces of gold. A small additional tonnage of high grade ore may have been mined by laymen.

Yukon Coal Company mined 9,243 tons of coal from its Tantalus Mine near Carmacks.

DAWSON DISTRICT

There was no lode mining done in the Dawson District in 1956. Interest in lode prospecting was sparked by the discovery of promising asbestos mineralization, and numerous claims were staked, the majority of them on favorable host rocks in the Cassiar Creek and Woodchopper Creek areas.

Most of the 147 claims staked in 1955 in the Barlow Creek area expired. The claims were staked to cover the area surrounding a supposed radioactive occurrence. No development work at all was done in the area.

Peel Plateau Exploration Company, Limited continued its oil exploration in the Peel and Porcupine Rivers areas in 1956.

J. Sestak continued to hold his claim groups covering an asbestos occurrence on Thomas Gulch, just east of Dawson, and a fluorite prospect at the mouth of Matson Creek. Only assessment work was done on the claims.

Conwest Exploration Company, Limited did extensive exploration work on claims in the Cassiar Creek area optioned from F.G. Coley and associates. The claims covered an asbestos occurrence on the left limit of the Yukon River, approximately 37 miles down stream from Dawson. Although it was accessible by river, the company built 10 miles of road to the property, connecting with the Dawson-Sixtymile Road about 30 miles west of Dawson. By July 15th they had opened an area 1,200 feet by 400 feet with a depth of 500 feet which carried asbestos fibre in talus. By fall, the company had collected bulk samples and submitted them to Cassiar Asbestos, Limited, and the Department of Mines and Technical Services for testing.

Gaymont Syndicate and Yukon Consolidated Gold Corporation, Limited did a certain amount of trenching on claims on an asbestos occurrence on Woodchopper Creek, 6 miles upriver from Cassiar, but the results were not encouraging. In addition, Yukon Consolidated Gold Corporation, Limited did trenching and drilling on the asbestos prospect on the hill immediately east of Dawson. The prospect had been known for many years, and was not considered to be a good one.

During October, November, and December, Asbestos Corporation carried out a magnetometer survey by helicopter and airplane in the immediate vicinity of Dawson. They planned to continue the survey in the spring of 1957.

Assessment work was done in 1956 on the group of 16 claims covering the bornite occurrence on Gold Bottom Creek. The claims were owned by six individuals, who had an agreement with Yukon Consolidated Gold Corporation whereby the company performed assessment and development work on the property. During the fall of 1956, the company carried out a brief drilling program, and staked 25 additional claims adjoining the original 16.

There were also four claims in good standing on a copper prospect which had been restaked many times in the past, on the ridge between West Gold Bottom Creek, and Carmacks Fork of Bonanza Creek. No work was done on the property.

Mr. J. Hanulik continued prospecting on 8 claims on the left limit of the Yukon River, about 8 miles above Dawson. He reported finding radioactivity on the property.

A few other claims were held in areas scattered across the Dawson District. Most covered old prospects. No development work on the claims was reported.

MAYO DISTRICT

Mineral exploration and development continued at a low level in the Mayo District during the year. Copper mineralization was reported in the Wernecke Mountain and Hart River areas, but the reports did not stimulate much interest due to the difficulties of access to the areas. Claims on some silver-lead properties in the Galena and Keno Hills areas were allowed to lapse. Others continued to be held, although no work had been done on them for several years.

Mining activity increased during the year when Mackeno Mines, Limited reopened its mine and mill under the name Galkeno Mines, Limited, and produced steadily from July 1st to the end of the year.

Galkeno Mines, Limited

During 1956, the company directed its efforts to exploration and development work, with the result of quadrupling its ore reserves tonnage.

On the 500 level, the internal winze was deepened to open a second level at a vertical depth of 250 feet below the main adit. Drifting disclosed an ore length of over 600 feet with a grade of 40 ounces of silver to the ton across an average width of five feet. This length was still open to the south. On the 400 level, the length of the ore shoot was increased from 180 feet to 240 feet, and was still open to the south. On the 300 level (Main Adit) no development was done. Some exploration was begun on the Sime and Sugiyama veins, with fair success. On the 100 foot level over one half of the favourable ground in the McLeod vein remained unexplored. This exploration was being done, again with favourable results.

Due to the successful exploration work, the mill was reopened on July 1st. It began processing 120 tons of ore per day, and later began handling 130 tons per day. As a further result of the exploration work, the company planned to drive a new adit approximately 5,000 feet long from a point at the bottom of Galena Hill near its mill in the Christal Creek area. The adit was planned to open up a new block of levels, and to allow cheaper mining through elimination of water problems, and pumping and hoisting costs. It was also planned so that the five mile ore haul by gravel road down Galena Hill could be replaced by a half mile run from the portal to the mill. Similar efficient methods were already being used at the adjacent Hector and Calumet Mines of United Keno Hill Mines, Limited.

Galkeno Mines, Limited produced 34,146.25 tons of ore during the year, from which 6,123.81 tons of concentrate containing 1,143,582.89 ounces of silver, 4,996,588.0 pounds of lead, 4,746,020.0 pounds of zinc, 48,565.3 pounds of cadmium, and 49.36 ounces of gold were produced.

United Keno Hill Mines, Limited

United Keno Hill Mines, Limited completed another successful year in 1956. Although the company's metal production was slightly lower than in 1955, profits were higher. The main underground work was done at the Hector and Calumet Mines. Development work was done at the Elsa and Keno Mines. Ore reserves, not including those at the Onek Mine, totalled 598,020 tons with an average grade of 36.9 ounces of silver per ton, 7.8% lead, and 7.0% zinc, as of September 30th, 1956.

The shipment of concentrates in plywood containers instead of jute sacks which was instituted April 1st, 1956 proved successful and resulted in a saving in labour and handling costs. There were ten thousand of the containers in use. No major construction was done during the year.

At the Hector Mine, development and mining produced 90,883 tons of ore, of which 84.1% was handled through the internal shaft. The balance was mined from the old workings above the 400 or main adit level. Lateral development was largely directed to testing the No. 1 and No. 3 vein structures on the 1165 level, and completing the development of the No. 2 vein structure on the 650 and 900 levels. Limited development was also done on the No. 4 vein on the 650 and 775 levels, to allow for ore extraction. On the 1165 level, the drive to the No. 3 vein was completed and drifting was carried out for 120 feet to its junction with the No. 4 vein. The structure was strong but only sparsely mineralized, and returned assays of below ore grade. Drifting was done on the No. 1 vein zone to the north for 100 feet. The vein was also strong there, with irregular mineralization returning some ore grade assays, but no continuous ore shoot was found. On the 1040 level, a crosscut was started and driven 200 feet toward the No. 3 vein zone.

In its first year of production, the Calumet Mine produced 61,106 tons of ore, or an average of 167 tons per day. Development continued throughout the year on the No. 1 vein structure on the 300, 525, 650, 775 and 900 levels. Total lateral development footage in ore amounted to 777 feet averaging 35.9 ounces silver per ton across an average width of 5.7 feet.

A new structure known as the No. 15 vein was found branching off the hanging wall of the No. 1 vein structure in the Calumet Mine. It was drifted out on the 300 and 400 levels. On the 300 level, an ore shoot was developed grading 40.5 ounces per ton across an average width of 6.0 feet for a length of 282 feet. On the 400 level, 392 feet of ore was developed grading 39.0 ounces silver per ton across an average width of 6.2 feet. In the development of the No. 15 vein, a considerable additional tonnage was indicated in the zone between the No. 1 and No. 15 veins. Development was proceeding in the No. 15 vein area on the 525 and 650 levels.

On completion of the hoist installation and station cutting at the Elsa Mine, a limited program of development was carried on throughout the year on the 525 level. Several small irregular isolated ore occurrences were found, some of which were of exceptionally high grade. They were closely associated with and largely adjacent to the Porcupine Creek Fault. Ore production for the year from development of these ore bodies totalled 3,713 tons grading 75.44 ounces of silver per ton.

There were 1,736 feet of drifting and crosscutting done at the Keno Mine on the "Top of the Hill Complex." This was the first part of a proposed two year program to check the downward continuation of fractures exposed on the surface in the greenstone, and to give access to a former producer known as the No. 9 vein. The adit cut the No. 6 vein where expected. A limited amount of drifting on the vein showed the structure to be strong and fairly well mineralized. Assays, however, were below ore grade. Beyond the No. 6 vein the adit cut several minor fractures and zones of alteration in the greenstone, but none of these contained ore grade mineralization. The project was suspended at the end of September due to winter conditions.

Reassessment of the Ladue Mine was not completed during the year as planned. The necessary retimbering of the old workings to allow access was not done due to a shortage of experienced underground workers. A limited work program was confined to some underground mapping of the low level adit, surface stripping by bulldozer and surface mapping.

No work was done at the No Cash, Bermingham, Onek, and Shamrock Mines during 1956.

During the summer, geological parties continued surface mapping on both Galena and Keno Hills. Mapping of all known major surface showings and contacts on Galena Hill between the Elsa and Calumet camps was completed, leaving only the Silver King area to be mapped. On Keno Hill, plane table mapping during the summer extended the area mapped to include the Lucky Queen and Wernecke areas. A small vein in greenstone at the west end of the Sadie-Friendship group and vein float some 1,000 feet on the hanging wall side of the Lucky Queen were mapped. Further investigation of those occurrences was planned.

The company had an average of 482 employees in 1956. During the year ending March 31st, 1957, 159,404 tons of ore were mined, from which 38,906.62 tons of concentrates were produced. The concentrates contained 5,614,677.01 ounces of silver, 23,570,997.7 pounds of lead, 20,912,677.7 pounds of zinc, and 288,033.53 pounds of cadmium.

Other Lode Operations

J.J. Colt and J.B. O'Neill performed several years assessment work on their 56 claims on Dublin Gulch. E.H. Barker and associates continued to hold their 17 claims covering an antimony-gold-silver prospect on Haggart Creek, opposite the mouth of Dublin Gulch.

C.D. Poli continued to hold his claims on Secret Creek, which covered an antimony-silver-gold occurrence similar to the one on Haggart Creek. Some bulldozing work was done on the claims.

J. Hawthorne continued to hold a large number of claims in the Highet Creek area, which covered antimony-silver-gold mineralization. Only essential assessment work was done.

All the claims remaining on both Stand-to Mountain, and Rambler Hill were allowed to lapse during 1956.

Beaver River Silver-Lead Mines, Limited continued to hold twenty-two quartz mining leases in the Beaver River area, and eight leases in the Alverson Gulch area on Mount Cameron. No work had been done on the first property for eight years; no work had been done on the second for 9 years.

Bankeno Mines, Limited, Bibis Yukon Mines, Limited and Comstock Keno Mines, Limited continued to hold their claims on Keno Hill during 1956, but no work was performed on any of them.

Consolidated Bellekeno Mines, Limited continued to hold fifteen quartz mining leases and one claim on Sourdough Hill, but did no work during on them during the year.

Jersey Yukon Mines, Limited performed sufficient assessment work on its 41 claims on Galena Hill to keep them in good standing for 2 years.

Jaye Explorations, Limited maintained four fractional claims on Keno Hill in good standing, but suspended option payments on the Besner-Milosevich property on the southerly slope of Keno Hill.

Mount Keno Mines, Limited continued to hold 32 claims in the Lightning Creek area. It was inactive during the year. Silden Mines Limited, which worked the claims under a lease agreement in 1955, terminated the agreement and did no work in the area during 1956.

North Denison Mines, Limited allowed its 14 claims on Galena Hill to lapse. The 11 claims held by Packeno Mines Limited on Galena Hill were also allowed to lapse.

Carl Nord sank a 25 foot deep shaft on his Silver Spoon claim on Galena Hill, and had encouraging results.

Northwest Explorations Limited continued to hold seven claims at the head of Parent Creek, but did no work on the property in 1956.

Yukeno Mines, Limited, which suspended operations at its Formo property near Christal Creek in July 1953, continued to hold 138 claims in the area.

WHITEHORSE DISTRICT

Prospecting activity in the Whitehorse District decreased in 1956. The most active areas during the year were the immediate Whitehorse area, the Wasson Lake area, the Vangorda Creek area, and the Koidern area of the White River region. Some activity was centered on the area of Mile 701, Alaska Highway. Other prospecting activity occurred in various parts of the district.

Development work also decreased in 1956. This was, however, partly compensated for as many claims were renewed for more than one year during 1955.

The Yukon Coal Company produced 9,243 tons of coal from its Tantalus Butte Mine near Carmacks during 1956. The production was 1967.4 tons less than in the previous year.

PLACER MINING

The total amount of gold recovered in the territory in 1956 on which royalty export tax was paid was 88,416.0 ounces produced as follows: 83,065.0 ounces, Dawson District, 4,280.6 ounces, Mayo District, and 1,070.4 ounces, Whitehorse District. Total production decreased over 1955 production by 3%. Production of the dredging operations of Yukon Consolidated Gold Corporation was about 53% of the total production of the territory. Production from the company's hydraulic workings was not reported, but was probably between 5,000 and 6,000 ounces of gold. If so, the company's production would have represented about 59% of the placer gold recovered in the territory during the year.

There were 54 placer claims staked or restaked in Yukon in 1954, and 561 claims were renewed. There were more than 1,737 placer claims in good standing at the end of the fiscal year.

DAWSON DISTRICT

There were 20 new, and 19 restaked placer claims recorded in the Dawson District in 1956, and 437 claims were renewed. There were 1,596 placer claims in good standing in the district at the end of the fiscal year.

Water was in good supply almost everywhere in the Dawson District during the 1956 mining season.

Gold production during 1956 totalled approximately 83,065 ounces.

Yukon Consolidated Gold Corporation, Limited

The company operated dredges Nos. 4, 6, 8, 9, 10, 11 and 12 on Bonanza, Lower Dominion, Lower Sulphur, Upper Sulphur, Middle Dominion, Junker and Jensen Creeks respectively, during 1956. The dredging season extended from May 1st to November 11th. A total of 4,960,352 cubic yards of gravel and bedrock was dredged, from which approximately 47,025 fine ounces of gold valued at $1,603,634.00 were recovered. Dredging costs totalled $1,172,330.00, or 23.63 cents per cubic yard. The recovery rate from the material dredged was approximately 0.013 crude ounces of gold per cubic yard, valued at 32.33 cents per cubic yard.

Hydraulic stripping removed 1,438,987 cubic yards of overburden at a cost of $206,011.00, or 14.32 cents per cubic yard. Artificial thawing operations, using cold water under pressure, thawed 2,241,394 cubic yards of material. The thawing work cost $115,417.00, or 5.15 cents per cubic yard thawed.

The hydraulic mining operation on Paradise Hill, on the left limit of Hunker Creek, was continued during 1956. A total of 177,208 cubic yards of material were processed, at a cost of $98,600.00, or 55.64 cents per cubic yard. The amount of gold recovered was not reported.

The company's hydro-electric power plant, located on the upper Klondike River, operated throughout the year. It generated 28,151,100 kilowatt-hours of electricity at a cost of $99,762.32, or 0.354 cents per kilowatt-hour.

The maximum number of employees during the year was 364. The company paid a total of $1,009,502.00 in wages and salaries to November 30th, 1956.

Yukon Placer Mining Company

Yukon Placer Mining Company started preliminary work on the Glacier Creek properties on April 20th. Dredging with the 3.75 cubic foot bucket-line dredge began June 6th, and finished October 12th. One D-7 Caterpillar bulldozer and a G.M.C. pumping unit were used for stripping ahead of the dredge. The open-cut mining operation began sluicing on an intermittent basis on May 11th, and operated until September 25th. Three D-8 Caterpillar bulldozers and a G.M.C. pumping unit were used in the sluicing operation.

A wet season provided adequate water for open-cut mining, and stripping during 1956. Deep penetration of seasonal frost during the winter of 1955-1956 contributed to problems with frozen ground in the dredging operation, however. Production totalled 7,672.53 fine ounces of gold, and 1,282.62 fine ounces of silver with a gross total value of $263,507.77. Yukon Placer Mining Company had 22 employees during the season.

Clear Creek Placers, Limited

According to the conclusion made by the company in 1955 that all the economic placer ground at its Clear Creek property had been mined, the company did not operate its dredge at all in 1956.

Yukon Gold Placers, Limited

Yukon Gold Placers, Limited continued to work on claims on Henderson Creek leased from Yukon Consolidated Gold Corporation, Limited in 1956. Their dredge shut down on October 10th, after operating for 110 days. During the season, 190,000 cubic yards of material were dredged and processed, from which 2,545.92 fine ounces of gold valued at $85,281.00 were recovered. The material mined and processed had an average value of 44.7 cents per cubic yard. Due to shallow ground, and frozen bedrock, an average of only 1,731 cubic yards per day was dredged. The company had an average of 18 employees at Henderson Creek during 1956.

Yukon Gold Placers, Limited continued to hold its property on Thistle Creek, but did not mine on it during 1956.

Mr. H. Falding, manager of Yukon Gold Placers, Limited and also of its affiliate, Clear Creek Placers, Limited, reported at the end of 1956 that due to unfavorable conditions the companies had decided to cease operating in the Yukon Territory. They intended to dispose of their equipment, which included dredges on Thistle, Henderson, and Clear Creeks as soon as possible.

Other Placer Operations

Terra Mines, Limited did not operate on their Little Gold Creek property during 1956, and their claims in the area lapsed.

The Boutillier brothers operated on Adams Gulch from April 1st to October 15th using a bulldozer, and hydraulic methods. In previous years, they used only hydraulic methods. They recovered 128.75 fine ounces of gold.

Mr. R.E. Troberg did not operate on his Bonanza Creek property during 1956 because Yukon Consolidated Gold Corporation, Limited dredge No. 4 was going through part of his ground, and the area which he had prepared for mining was low grade.

Mr. B. Bratsberg worked alone on Gold Bottom Creek between June 1st and September 15th. He used a bulldozer and hydraulic sluices, and recovered 750 ounces of gold. He reported an exceptionally good water supply during 1956.

Mr. G. Shaw did only assessment work on his property on Gold Bottom Creek during 1956. However, his partner Wm. Hakonson operated with 3 employees, 2 bulldozers and sluices on claims they had acquired on Bonanza Creek. They recovered 248.97 fine ounces of gold. Production might have been higher had machinery breakdowns not occurred.

From April 1st to November 3rd, Mr. J. Bremner, his son, and one employee ran their hydraulic operation on a Last Chance Creek bench. Their water supply was good. They recovered 92.08 fine ounces of gold, which was less than their recoveries in previous years due to the fact that they operated so late in the season that their sluices, etc. became frozen in. They expected a substantial recovery of gold from their cleanup in the spring of 1957.

Mr. R.S. Gould, and his son J.A Gould operated on Nugget Hill, Hunker Creek between May 1st and October 1st using a bulldozer and hydraulic methods. They recovered 106.02 fine ounces of gold.

Northern Placers, Limited did not operate in the area they mined on Adams Gulch in 1955, but instead moved their bulldozers, dragline and hydraulic equipment to property leased from DeCoursey-Brewis Minerals, Limited on All Gold Creek. They worked from June 1st to September 10th with five employees, and recovered 646.93 fine ounces of gold valued at $20,000.00. The manager of the operation reported that it was definitely not a paying proposition, and the company would not be mining on All Gold Creek during 1957.

Mr. A. T. Fry and his son D. A. Fry worked on Monte Cristo Gulch, Bonanza Creek, from May 1st to June 1st. They mined an area of 15,000 bedrock square feet, and recovered 60 ounces of gold. When the spring run-off of water finished, they moved their D-6 Caterpillar and T.D. -40 International bulldozers to their operations on Hunker Creek where they worked until September 25th, stripping 50,000 cubic yards in preparation for mining in 1957. In what little sluicing and hydraulic work they had time for, they recovered another 60 ounces of gold. They reported having a good water supply in both areas.

Mr. L.D. Cole and three employees worked on Bonanza Creek at the mouth of Gauvin Gulch from April 15th to September 15th. They used one D-8 Caterpillar bulldozer, a pump, a light plant, and hydraulic equipment, and recovered 321.27 fine ounces of gold.

Mr. E. Schink, and his partner J.R. Colbourne sold their garage business in Dawson and went entirely into placer mining in 1956. Mr. Schink and one employee used two bulldozers and hydraulic methods to mine their Paradise Hill property on Hunker and Hester Creeks. They worked from May 15th to September 30th, and recovered 500 ounces of gold. Their water supply was better than in most seasons, but operations were hindered by ground frozen up to 9 feet deep. Mr. Colbourne also operated from May 15th to September 30th. He worked alone, using a bulldozer to strip ground on Gold Bottom Creek in preparation for mining in 1957.

Adolphe and Alcide Coulombe worked on Bonanza Creek at the mouth of Ready Bullion Creek from May 15th to September 15th. They used 1 D-4 Caterpillar bulldozer, a pumping plant, and sluices. They mined an area of 36,000 bedrock square feet and recovered 64.65 fine ounces of gold. Their water supply was good, but the ground they mined was low-grade, causing them to abandon the property.

Ballarat Mines, Limited did not mine on Ballarat Creek during 1956. They confined their operations to the "Groetscher" bench on the left limit of the Klondike River at its mouth. Work was carried out from April 15th to October 9th. Equipment maintenance and repairs were done from April 15th to May 28th, when sluicing was begun. Equipment used included one D-8 Caterpillar bulldozer, with a second in use from mid-August until the end of the season, a D-13000 pumping unit generator with 5X4 high pressure pump, a D-3400 power unit with generator, and one D-4 Caterpillar bulldozer. There were 1,459.72 fine ounces of gold, and 308.63 fine ounces of silver with a gross value of $50,976.56 recovered. The recovery was three times that of 1955, when the operation was in its experimental stage. The wet, rainy season did not help the operation, as it was pumping water from the Klondike River and would have had a plentiful supply in any case. Ballarat Mines, Limited had four employees during 1956.

J. Lacross and F. Whitehead moved into the Klondike from Alaska in 1956 with two TD-18 International bulldozers, a dragline, a placer drill, hydraulic equipment, and other miscellaneous equipment. From June 15th to August 31st they carried out a drilling and open cut prospecting programme on ground leased on Black Hills Creek, employing three men, but dropped the proposition as unprofitable. They also prospected on Hunker Creek. They produced no gold in 1956.

Having dropped their holdings on Scroggie Creek, George Fant and Ivor Norbeck mined in 1956 on ground on the Left Fork of Clear Creek, optioned from Clear Creek Placers, Limited. They operated from June 30th to September 24th, using one TD-18 International bulldozer and sluices, and recovered 289.49 fine ounces of gold.

Messrs. O. Medby and J.A. Lamontagne continued to work on Hydraulic Lease #46 on Miller Creek and #45 on Bedrock Creek during 1956. They operated from May 1st to September 25th. Mr. Medby and one employee mined on Miller Creek using two D-6 Caterpillar bulldozers and sluices. They mined and processed 50,000 cubic yards of material, and recovered approximately 725 fine ounces of gold valued at $25,000. Mr. J.A. Lamontagne and one employee mined on Bedrock Creek using two D-6 Caterpillar bulldozers and sluices. They also mined and processed 50,000 cubic yards of material, and recovered gold valued at $25,000.00. There were approximately 0.017 crude ounces of gold valued at 50 cents recovered from each cubic yard of material processed at both operations.

Mr. J. Sestak and six employees mined on Ten Mile Creek near the mouth of the Sixtymile River, using two D-6 Caterpillar bulldozers, and sluices. They operated from April 1st to October 8th, and recovered 837.01 fine ounces of gold valued at $30,000.00. Water on the creek was very high in 1956, and caused washouts at times.

MAYO DISTRICT

Three new placer claims were issued in the Mayo District during 1956, and 74 claims were renewed. There were 79 claims in good standing at the end of the fiscal year. Placer mining activity remained at the level of 1955. There were 4,280.6 ounces of gold recovered in the district during 1956, a decrease of 844.3 ounces from 1955.

Waddco Placers, Limited continued mining on Haggart Creek with a crew of 5 to 6 employees. They recovered 3,494 30 ounces of gold.

Fred Taylor again operated for only part of the season in 1956. He recovered 637.10 ounces of gold from his property on Dublin Gulch.

Clifford Greig also operated for part of the season on ground on Dublin Gulch purchased from Mr. Taylor. He recovered 123.34 fine ounces of gold.

K. Djukastein and J. Sandanger prospected a placer lease on Johnson Creek with apparently negative results.

WHITEHORSE DISTRICT

There were 12 new placer claims issued, and 50 claims were renewed during the year. Seven prospecting leases covering 9 miles were issued, and three leases covering 5 miles were renewed. There was very little placer prospecting in the Whitehorse District during the year. One large, and one small mining operation did not resume work during 1956. Gold recovered in the district during the year totalled 1,066.48 ounces, significantly less than the 1955 production of 1,745.57 ounces. Royalty was paid in Whitehorse on a few ounces of gold from Ballarat Creek and Dublin Gulch, in the Dawson and Mayo Districts.

Burwash Mining Company continued work on Burwash Creek during 1956, and recovered 724.88 fine ounces of gold. Kluane Dredging Company did not resume its operation on Gladstone Creek. Work at Canadian Creek was also not resumed in 1956. The Versluce operation on Sugden Creek was active during the year, and a new operation was started on ground held by T. Kabanak on lower Burwash Creek. Gold shipments made through the Whitehorse Mining Recorders' Office in 1956 were as follows.

Burwash Creek	865.48 ozs.
Sugden Creek	173.20 ozs.
Bullion Creek	10.90 ozs.
Dezadeash River	6.45 ozs.
Ballarat Creek (Dawson District)	3.25 ozs.
Dublin Gulch (Mayo District)	.70 ozs.
Miscellaneous	10.45 ozs.
Total	1,070.43 ozs.

CHAPTER 18

MINERAL INDUSTRY OF YUKON, 1957

INTRODUCTION

Reports by F.H. Collins, Commissioner, G.A. McIntyre, Mayo Mining Recorder, and the Whitehorse Mining Recorder, and publications of the Emergency Gold Mining Assistance Act were used in compiling information on the mineral industry in Yukon in 1957.

LODE MINING

Lode prospecting activity in the Yukon Territory was restricted in 1957 compared to previous years. Few new discoveries were made in 1956, and 1957, and the number of geological, geophysical, and geochemical examinations done on properties was greatly diminished. The drop in base metal prices caused a reduction in the number of field parties engaged in searching for base metal deposits. Eleven companies fielded prospecting parties in 1957, compared to 17 in 1955. Nine of the companies were active in the Dawson area, where asbestos deposits were being sought. Underground exploration work was done on one asbestos occurrence near Dawson. In the Mayo area, Galkeno Mines, Limited suspended operations during the year. Less prospecting, claim staking, and development work was done than in previous years. Exploration activity also decreased in the Whitehorse area. Development work was carried out at only one property, the Canalask Nickel property in the White River area.

There were 360 new lode claims recorded, and 208 claims were renewed in the Dawson District. There were 577 in good standing at the end of the fiscal year. In the Mayo District, only 95 new claims were recorded, and 457 claims were renewed. There were 1,324 quartz claims, and 307 quartz leases in good standing at the end of the fiscal year. There were 430 new claims recorded, and only 510 claims were renewed in the Whitehorse District in 1957, less than 20% of the number of claims recorded and renewed just two years earlier.

Production from lode mining operations in the Elsa-Keno Hill area during 1957 totalled 37,066 tons of concentrate containing 25,030,486 pounds of lead, 6,327,332 ounces of silver, 21,455,059 pounds of zinc, and 246,111 pounds of cadmium. A small additional tonnage of high grade ore may have been mined by laymen. The 1957 production of concentrate was nearly 18% lower than the 1958 production as a result of the closure of the operations of Galkeno Mines Limited due to unfavourable metal prices.

Yukon Coal Company mined 7,600.9 tons of coal at its Tantalus Mine near Carmacks.

DAWSON DISTRICT

There was no lode mining in the Dawson District in 1957. Exploration and development work during the year concentrated on the recently discovered, promising asbestos occurrences in the Clinton and Cassiar Creeks areas. Almost all the new claims staked in 1957 were staked in the Clinton Creek area, about four miles upstream from its confluence with the Fortymile River.

Peel Plateau Exploration Company, Limited continued its oil exploration work in the Peel and Porcupine Rivers areas in 1957. They were reported to have drilled a well during the summer, but there was no information concerning the results of the work.

Conwest Explorations, Limited optioned twenty-four claims covering an asbestos occurrence in the Clinton Creek area from F.G. Caley and associates. The company also acquired 52 additional claims adjoining the property of F.G. Caley and associates. The 52 claims were transferred to Cassiar Asbestos Corporation, Limited, which company also took over the Conwest option on the original group of 24 claims.

Exploration work was carried out by Cassiar Asbestos Corporation, Limited at the Clinton Creek property, with a crew of 20 men. They did surface trenching with wagon drills, and a representative sample of ore was sacked and shipped to Cassiar, B.C. for testing. Two adits were driven in the ore zones for estimated distances of 2,500 to 3,000 feet. By the end of February, 1958, one adit had been driven 1,190 feet, and the other had been driven 52 feet. Supplies for the work were hauled from Dawson via the Dawson-Sixtymile road. Daily ore samples were sacked, and hauled to Dawson on the return trips. These samples were also sent to Cassiar for testing. It appeared that the Clinton Creek deposit would not be as high in grade as the one at Cassiar, B.C. but might be of greater extent.

Conwest Explorations, Limited continued to hold their option on 36 claims owned by F.G. Caley et al, covering an asbestos occurrence at Cassiar Creek, and also owned 5 adjoining claims there. Assessment work sufficient to keep the claims in good standing until 1961 was done on them in 1956, and the property was not explored during 1957.

Canadian Explorations, Limited owned or had interests in 53 claims adjoining the property in the Clinton Creek area being development by Cassiar Asbestos Corporation, as well controlling 24 claims on Micky Creek, a right limit tributary of the Fortymile River opposite Clinton Creek. No work was reported on either property.

Asbestos Corporation, Limited acquired an option from Messrs. H. and W. Krause on 32 claims on Shell Creek, a right limit tributary of the Yukon River a few miles below Fortymile. The claims were reported to cover an iron prospect.

Gaymont Syndicate optioned sixteen claims on an asbestos prospect on Woodchopper Creek, about thirty miles down river from Dawson on the left limit of the Yukon River. Only assessment work was done on the claims.

The Yukon Consolidated Gold Corporation, Limited filed assessment work on 44 claims held by the company and others. The claims covered a low-grade asbestos occurrence on the hill immediately east of Dawson.

Mr. J. Sestak continued to hold eight claims covering an asbestos occurrence on Thomas Gulch just east of Dawson, and a few claims on a fluorite prospect at the mouth of Matson Creek. Only assessment work was done on both properties.

There were still four claims in good standing near the mouth of Miller Creek, over an old silver-lead prospect. No development work was reported on them. Also in the Miller Creek area, forty claims were staked by five individuals in 1957 over what they thought might be a nickel prospect. There was no development work done on the claims.

Only assessment work was done on fifteen claims covering a copper occurrence on Gold Bottom Creek, still held by six individuals. The twenty-five claims staked around this property by the Yukon Consolidated Gold Corporation, Limited in 1956 expired.

There were also sixteen claims on the ridge between West Gold Bottom Creek and Carmacks Fork of Bonanza Creek. They covered an old copper prospect that had been staked many times.

A few other claims were held in areas scattered across the Dawson District. Most covered old prospects. No development work on any of the claims was reported.

MAYO DISTRICT

Mineral exploration and development activity was at a very low level in the Mayo District during 1957. No promising results came from prospecting work. None of the reported copper showings in the Wernecke Mountains attracted the attention of mining companies. Only limited prospecting work was done in the Keno and Galena Hill areas. The only development work done was carried out by United Keno Hill Mines, Limited. Galkeno Mines, Limited suspended its mining operations in September. Unfavorable base metal prices influenced the general lack of activity in the district during 1957.

Galkeno Mines, Limited

Galkeno Mines, Limited suspended its operations on Galena Hill in September, 1957 due to unfavorable metal prices. The internal shaft and low level adit which were on the 1957 development program were abandoned, unfinished, in August. During the company's period of operation in 1957, 17,678.9 tons of ore were mined, from which 1,983.3 tons of concentrates containing 590,047.8 ounces of silver, 2,300,904.0 pounds of lead, 2,540,844.0 pounds of zinc, and 9,205.0 pounds of cadmium were produced. The company appeared to finally be establishing itself as a producer when it was forced to close.

United Keno Hill Mines, Limited

United Keno Hill Mines, Limited completed another successful year during 1957. The main underground work was done at the Hector and Calumet Mines. Development work was done at the Jock, Elsa, and Keno Mines. The company increased its ore reserves slightly during the year. Not including those at the Onek Mine, reserves at the end of September, 1957, totalled 601,165 tons with an average grade of 36.8 ounces of silver per ton, 7.3% lead, and 6.0% zinc.

At the Hector Mine, development and mining throughout the year produced an average of 216 tons per day. Practically all of this was handled through the internal shaft. Lateral development was directed to cross-cutting the No. 1, No. 2 and No. 3 vein structures on the 1,040 level, and to drifting on the No. 1 and No. 3 veins on the 1,040 and 1,165 levels. Limited development was also carried out on the No. 4 vein to the south on the 775 and 900 levels and on the No. 3 vein to the south on the 525 level. It was reported that the development in the south section of the mine was encouraging, as it indicated ore south of that found on the upper levels.

A total of 620 feet of ore averaging 34.7 ozs. of silver across an average width of 5.2 feet was developed in the Hector mine. Most of the developed ore was in the southern extensions of the No. 3 and No. 4 veins on the 525, 775, 900 and 1,040 levels, with the 1,040 level showing 270 feet of ore averaging 36.18 ozs. of silver per ton across an average width of 5.2 feet. Development on the 1,165 level was slow due to wet, heavy ground. The structure on that level was strong, but only irregular mineralization of below ore grade was encountered in 1957.

Production from mining and development at Calumet mine during the year averaged 193 tons per day. Development continued on the No. 1 vein structure on the 525, 650, 775 and 900 levels, and on the No. 15 vein zone on the 525 level. Total lateral development footage in ore on the No. 1 vein structure was 612 feet averaging 45.4 ozs. silver per ton across an average width of six feet. In the No. 15 vein zone on the 525 level, lateral development in ore totalled 371 feet averaging 39.5 ozs. silver per ton across an average width of 5.6 feet. Vertical development by raising and sub-cross-cutting showed considerably expanded widths of ore in the zone between the No. 1 and No. 15 veins.

A total of 229 feet of drifting was done in the Jock Mine on the 1,040 level from the Hector Mine. A short continuous ore shoot was developed, which returned average assays of 31.3 ozs. of silver across an average width of five feet for a length of 22 feet.

On the 400 and 525 levels of the Elsa mine, lateral development was continued throughout the year with encouraging results. The work was largely directed to the checking of ore indicated by drilling under the Porcupine Creek fault. Some exceptionally high assays were obtained. The work was being continued. A limited amount of rehabilitation work was done in the old upper working at the Elsa Mine in order to allow for drilling and checking. The total ore production from the mine for the year ending September 30th was 10,043 tons of ore averaging 72.24 ozs. of silver per ton.

The planned rehabilitation of the Ladue mine shaft on Keno Hill was not carried out during the year, owing to a shortage of experienced underground workers. A limited program of surface stripping was done to the north of the Ladue workings. It disclosed several small mineral showings but results were inconclusive.

A total of 1,656 feet of drifting and crosscutting and 113 feet of raising was done during the summer at the Keno Mine. The lateral advance broke into the old No. 9 working, thus completing the two year development program. The No. 9 vein was cut at an elevation just below the old 200 level. The vein was drifted for 156 feet and showed 135 feet of ore having a width of 7.9 feet, and assaying 36.7 ozs. of silver per ton. The face was in ore at the end of the 1957 work.

No work was done on the No Cash, Bermingham, Onek, and Shamrock Mines during the year.

Surface mapping was continued on Galena and Keno Hills. The Silver King area was mapped, completing the general mapping on Galena Hill. On Keno Hill, the Lake and United Keno groups of claims were mapped. The area between the Lucky Queen and Klondike Keno groups was also mapped. Most of the surface mapping on Keno Hill was also completed.

During the year, the company staked 19 claims and purchased 29 more. They owned, or had under option 537 claims.

The Elsa concentrator operated at an average daily rate of 438 tons. Of tonnage treated, 49.27% came from the Hector Mine, 44.16% from the Calumet, 6.28% from the Elsa, and 464 tons from the Jock Mine. The company milled a slightly larger tonnage in 1957 than in 1956. The average grade with respect to lead and zinc was lower, although the silver grade was higher. During the year ending March 31st, 1958, 165,746.0 tons of ore were mined, from which 35,082.63 tons of concentrates were produced. The concentrates contained 5,737,283.64 ounces of silver, 22,729,582.2 pounds of lead, 18,914,214.6 pounds of zinc, and 236,905.87 pounds of cadmium.

The company's transport division hauled a total of 52,073 tons during the company's fiscal year. The freight consisted of concentrates, coal and timber products, and mine supplies. The highway fleet was converted to diesel units during 1957. The Northern Canada Power Commission completed installation of a second unit at the Mayo Hydro Plant, and the company was thus able to abandon coal in its central heating plants and to convert to electric boilers for heating at Elsa and Calumet. The company had an average of 498 employees during the year.

Other Lode Operations

J.J. Colt and J.B. O'Neill performed only representation work on their Dublin Gulch property. They allowed 15 claims to lapse, and continued to hold 41 claims. Other operators in the Haggart Creek, Highet Creek, and Kathleen Lakes areas retained their claims. In the Wernecke Mountains area, R.L. McKamey staked a group of 16 claims over a copper occurrence near the junction of the Bear and Wind Rivers. This copper showing was first staked about 1930 by old time prospector named McCluskie.

The showings on Stand-to Mountain were not restaked during 1957. The claims on Rambler Hill which lapsed in 1956 were restaked, and additional claims were staked on the north slope of the hill. Forty claims were staked in total.

Beaver River Silver-Lead Mines, Limited continued to hold 22 quartz mining leases on MacKay and Silver Hills in the Beaver River area, and eight leases on Alverson Gulch, Mount Cameron. No work was performed on the leases.

Bankeno Mines, Limited continued to hold eighteen quartz leases on Keno Hill. The company remained inactive throughout the year.

Bibis Yukon Mines, Limited secured leases on the seven claims it held near Faro Gulch on Keno Hill. The company did no work of any kind during the year.

Comstock Keno, Limited held eleven claims on Keno Hill, including the Gold Star claim on which a promising ore zone was found in 1954. The company was inactive during the year. J.B. O'Neill secured a lease on the Gambler claim and shipped a small quantity of ore to the smelter at Trail. No details were available regarding the size of the shipment or the smelter returns.

Consolidated Bellekeno Mines, Limited held fifteen quartz mining leases on Sourdough Hill. The company did no work during the year.

Jersey Yukon Mines, Limited held 40 claims on Galena Hill, but did no work on them in 1957.

Jaye Exploration, Limited sold its four remaining fractional claims on Keno Hill to United Keno Hill Mines, Limited. United Keno Hill Mines, Limited also optioned the Besner-Milosevich "Blue Rock" group, formerly under option to Jaye Explorations.

Mount Keno Mines, Limited held 32 claims in the Lightning Creek area. No work was done on the property during 1957.

Alex Smith located a galena showing near the Elsa-Keno road. It was the fourth new occurrence along the road. The others were Fred Taylor's "Ida" showing, and Carl Nord's "Ram" and "Silver Spoon" occurrences. None of the new occurrences was explored sufficiently to determine its economic potential.

Northwest Explorations, Limited held its group of seven claims at the head of Parent Creek, but did no work on them during 1957.

Yukeno Mines, Limited which suspended operations at the Formo property near Christal Creek in 1953, continued to hold 138 claims in the area.

WHITEHORSE DISTRICT

Activity in lode prospecting and development fell to the lowest it had been since 1951, as many of the larger companies curtailed their field operations apparently due to the drop in market prices of base metals. There were, however, several groups of claims staked in the vicinity of Hayes Peak at the north end of Teslin Lake and north of Mile 860 on the Alaska Highway. These claims covered asbestos showings, and were optioned by Conwest Exploration Company, Limited. The asbestos showings were not new discoveries, but publicity given to asbestos due to significant finds near Dawson, and an increased demand for the short-fibre type found in the area awakened interest in the showings.

Newmont Mining Corporation completed diamond drilling on their Liard River copper property, and at the end of the season dropped all but fifteen claims. The slump in the price of copper, which was attributed to excess in supply over demand, did not bode well for further development of copper showings in the area in the near future.

Dale Mountain Mines, Limited (Camera Developments) let a contract for a 1,000 foot adit on its lead-silver property at Mile 706, Alaska Highway. The development progamme was started as a result of trenching, and an electromagnetic survey done in 1956. Values of $140.00 per ton across five feet were reported from the trenching.

Some renewed interest in lode gold mining was evidenced by the acquisition of the LaForma, and adjacent properties, on Mount Freegold by Ormsby Mines, Limited. The LaForma property had been optioned several times in the past, but still seemed to have possibilities for development, especially if the price of gold improved. Transportation facilities in the vicinity of the property were greatly improved by the construction of the Whitehorse-Mayo road. The only immediate plans for work on the property were for a survey, and for application for leases on the claims.

The only underground development work during the year was carried out by Canalask Nickel Mines, Limited on their property at the White River. The company completed a vertical shaft 350 feet below the adit level. Lateral development work was begun the last week in February, 1958. Development work to determine the ore potential at the property was expected to take some time.

Failure to develop a large tonnage on the Quill Creek nickel-copper property, after about three years of work and the expenditure of roughly three million dollars, was the deciding factor in the suspension of operations by the Hudson Bay Exploration and Development Company, Limited at the property in 1957.

Routine inspections were made by staff of the Mining Recorders' office in 1957, in connection with applications for leases on 95 claims in the Whitehorse District. The applications were by M. Watson of Carcross for a single claim on the Watson River and a group of three claims on Montana Mountain, and by Hudson Bay Mining Company for 91 claims on its Quill Creek property. The inspector's report on Mr. Watson's claims reported that the Charleston claim was at the head of the Watson River, about forty-five miles west of Robinson, on the White Pass and Yukon Railway. The record on the property went back to 1906, and it was described by W.E. Cockfield of the Geological Survey, in his report of 1922. Although the vein was extensive metal values were erratic and generally low. There was a fairly good showing of gold-silver ore on the Montana Mountain claims, but the vein was too narrow to attract capital investment. Mr. Watson planned to continue work on the Montana Mountain property.

The Yukon Coal Company continued to mine at its Tantalus Butte Mine near Carmacks in 1957. It produced 7,600.9 tons of coal.

PLACER MINING

The royalty payable on placer gold being transported outside the Yukon Territory was reduced on April 1st, 1957 at the beginning of the 1957-1958 fiscal year, from 37.5 cents per troy ounce to 22.5 cents per troy ounce.

The total amount of gold recovered in the territory in 1957 on which royalty export tax was paid was 92,833.4 ounces, produced as follows: 89,004.4 ounces, Dawson District, 2,193.2 ounces, Mayo District, and 1,635.8 ounces, Whitehorse District. Total production increased 5% over the year earlier. Production on Yukon Consolidated Gold Corporation increased in 1957 to 60% of the total production of the territory. There was a 12% increase over the year in gold production by the company's dredges.

There were 64 claims staked or restaked during 1957, and 553 claims were renewed. There were at least 1,456 placer claims in good standing at the end of the fiscal year.

DAWSON DISTRICT

Placer prospecting and mining activity in the Dawson District decreased during 1957. Only 4 new claims were staked, and 12 claims were restaked in the district in 1957, and 404 claims were renewed. There were 1,262 claims in good standing on March 31st, 1958, compared to 1,596 claims one year earlier. There were also four hydraulic leases in good standing in the district.

With the exception of a very few areas, the water supply for placer mining was very poor during 1957. However, gold production during the year was 89,004.4 ounces, or almost 6,000 ounces more than the 83,065 ounces recovered in 1956.

Yukon Consolidated Gold Corporation, Limited

The company operated dredges Nos. 4, 6, 8, 9, 10, 11 and 12 on Bonanza, Lower Dominion, Lower Sulphur, Upper Sulphur, Middle Dominion, Hunker and Jensen

Creeks respectively, during 1957. The dredging season extended from May 1st to November 30th. A total of 6,283,046 cubic yards of gravel and bedrock was dredged, from which approximately 52,650 ounces of gold valued at $1,795,138.00 were recovered. Dredging costs totalled $1,358,709.00, or 21.63 cents per cubic yard. The recovery rate from the material dredged was approximately 0.011 crude ounces of gold per cubic yard, valued at 28.57 cents.

Hydraulic stripping removed 1,242,555 cubic yards of overburden at a cost of $163,080.00, or 13.12 cents per cubic yard. Artificial thawing operations, using cold water under pressure, thawed 2,376,147 cubic yards of material. The thawing work cost $125,431.00, or 5.28 cents per cubic yard thawed.

The hydraulic mining operation on Paradise Hill, on the left limit of Hunker Creek, was continued in 1957. A total of 371,570 cubic yards of material was processed, at a cost of $102,640.00, or 27.62 cents per cubic yard. Approximately 3,190 ounces of gold valued at $108,734.00 were recovered. The recovery rate at the hydraulic operation was approximately 0.012 crude ounces of gold per cubic yard, valued at 29.26 cents.

The company's hydro-electric power plant, located on the upper Klondike River, operated throughout the year. It generated 26,173,400 kilowatt-hours of electricity at a cost of $99,229.00, or 0.379 cents per kilowatt-hour.

The maximum number of employees during the year was 347. The company paid a total of $1,101,250.00 in wages and salaries to November 30th, 1957.

Yukon Placer Mining Company

Yukon Placer Mining Company started preliminary work on their Glacier Creek properties on April 20th. Dredging with the 3.75 cubic foot bucket-line dredge began June 1st, and finished September 25th. One D-7 Caterpillar bulldozer was used for stripping ground ahead of the dredge. The open-cut mining operation began on May 15th, and continued until September 21st. Four D-8 Caterpillar bulldozers, and a sluicing outfit including a G.M.C. pumping unit were used.

The season was very dry. The company had to return water for sluicing for a considerable part of the season, but otherwise mining conditions were favourable. Production from both operations totalled 8,637.01 fine ounces of gold, and 1,574.23 ounces of silver, with a gross value of $290,489.08. Yukon Placer Mining Company had 24 employees during the season.

Clear Creek Placers, Limited

Clear Creek Placers, Limited closed its dredge on Clear Creek at the end of the 1955 season, and was not active in 1956 or 1957.

Yukon Gold Placers, Limited

Yukon Gold Placers, Limited did not operate its dredge on Henderson Creek, which was active in 1956, during 1957. The company's dredge on Thistle Creek, which had not been active for several years, was also not operated during 1957. This company announced plans at the end of the 1956 season to cease placer mining in the territory and to divest itself of its equipment.

Other Placer Operations

Messrs. H.C. and D.F. Boutillier operated on Adams Gulch, Bonanza Creek from April 1st to October 12th, using a bulldozer and hydraulic methods. They recovered 300 ounces of gold. Their water supply was good for one month in the spring, and very poor for the rest of the season.

Mr. B. Bratsberg operated on Gold Bottom Creek from June 30th to September 25th, using a bulldozer and sluices. He had one employee for two months. They recovered 200 ounces of gold, much less than usual, because work started late in the season, and the water supply was very poor while they were operating.

From April 1st to September 15th, Wm. Hakonson operated with two hired men on Lovett Gulch, Bonanza Creek, using one D-6 Caterpillar bulldozer, and two pumps for sluicing. They mined an area of 20,000 bedrock square feet, and recovered 360.25 ounces of gold. The water supply was good all season at Lovett Gulch.

Mr. J. Bremner, his son, and one hired man ran their hydraulic mining operation on a Last Chance Creek bench from April 1st to October 15th. They recovered only 50.24 fine ounces of gold. Their water supply was fair in the spring, but extremely poor the rest of the season. The low production was due to the fact that they did not have enough water to finish the clean-up.

Mr. R.J. Gould, and his son mined on Nugget Hill, Hunker Creek from May 1st to October 10th using a bulldozer, and hydraulic methods. They recovered 71.37 fine ounces of gold. The low gold production was mainly due to a very poor water supply.

Northern Placers, Limited did not operate during 1957.

Mr. A.T. Fry and his son, D.A. Fry operated on Hunker Creek from May 1st to August 1st. They used a TD-40 International bulldozer, and sluices with a PD-40 pump, and recovered 20 ounces of gold. Their water supply was very poor. Most of the season was spent in stripping ground for mining in 1958.

The Cole brothers carried out no mining operations during 1957.

Messrs. J.R. Colbourne and E. Schink mined from May 1st to September 30th. At their operation on Paradise Hill, Hunker Creek, Mr. Colbourne mined using a bulldozer and sluices, and recovered approximately 425 ounces of gold. Mr. Schink ran their second operation, on Gold Bottom Creek, and also mined using a bulldozer and sluices. Gold recovery from that operation was approximately 430 ounces. The water supply was plentiful in the spring, and poor during the rest of the season on Hunker Creek, and poor all season on Gold Bottom Creek.

Adolphe and Alcide Coulombe did not mine during 1957.

Ballarat Mines, Limited carried out some stripping on their property on "Groetcher Bench" on Klondike Hill opposite Dawson in 1957. They did no mining during the year, however.

Mr. L. Ross, with one hired man, mined on property on Kirkman Creek under agreement with the owners, Ballarat Mines, Limited from May 15th to October 7th. Two TD-18 Caterpillar bulldozers, sluices and a pump were used. There were 467.51 fine ounces of gold recovered. Ten days were spent stripping ground in preparation for mining in 1958. The water supply on Kirkman Creek was fair all season.

J.P. Lacross, no longer in partnership with F. Whitehead, mined on Quartz Creek with one employee from May 1st to October 15th. They used two TD-18 International bulldozers and sluices. Prospecting with a drill was done during May and June. The balance of the season was mainly taken up with stripping and preparing ground for 1958 mining. Although the water supply was very poor all season, 288.95 fine ounces of gold were recovered by the small amount of sluicing done.

Mr. O. Lunde acquired several placer claims on Dominion Creek in the spring of 1957. From June 15th to October 31st, he operated alone, using one D-6 Caterpillar bulldozer and sluices. He recovered 122.38 fine ounces of gold. His water supply was poor early in the season, and fair during the fall.

George Fant and Ivor Norbeck, who had previously worked on Scroggie Creek, mined on the Left Fork of Clear Creek during 1957 on a few claims of their own, and on ground leased from Clear Creek Placers, Limited. They operated from April 20th to October 1st, using one TD-18 International bulldozer and sluices. They recovered 376.84 fine ounces of gold. Some ground was stripped in preparation for mining operations in 1958. The water supply at Clear Creek was good all season.

Messrs. O. Medby and J. Lamontagne continued to work on Hydraulic Lease # 46 on Miller Creek, and # 45 on Bedrock Creek during 1957. Mr. Medby and one employee worked from May 15th to September 30th on Miller Creek, using two D-6 Caterpillar bulldozers and sluices. They mined approximately 50,000 cubic yards of material, and recovered 600 ounces of gold. Their recovery rate was 0.012 ounces of gold per cubic yard of material processed. Mr. Lamontagne and one employee worked from May 15th to September 15th on Bedrock Creek with one employee. They also used two D-6 Caterpillar bulldozers, and sluices. They mined approximately 50,000 cubic yards of material, and recovered 1,000 ounces of gold. Their recovery rate was 0.02 ounces of gold per cubic yard of material processed. The water supply on Miller Creek was poor all season, and on Bedrock Creek it was fair all season.

Mr. J. Sestak and 6 employees mined on Ten Mile Creek near the mouth of the Sixtymile River, using 3 D-6 Caterpillar bulldozers, sluices, and one small pump. They operated from April 15th to October 8th, and recovered 475.74 fine ounces of gold. They also stripped one-half mile of ground in preparation for mining in 1958. Their water supply was poor during much of the season.

MAYO DISTRICT

Placer mining activity in the Mayo District was at the same level in 1957 as it was in the year previous, although gold recoveries dropped significantly. Three new claims were staked in the district during the year, and 79 claims were renewed. There were 79 claims in good standing at the end of the fiscal year. There were 2,193.2 ounces of gold recovered during 1957, or approximately half of the amount recovered in 1956.

Waddco Placers, Limited continued operating on Haggart Creek with a crew of four to six employees. They did not have a very successful year, as they recovered only 1,666.95 fine ounces of gold. The company planned to move its operation to Spruce Creek in the Atlin area for the 1958 season.

Fred Taylor spent most of the season performing dead work on this Dublin Gulch property to prepare the ground for future mining. He produced only 95.55 ounces of gold.

Clifford Greig also had a disappointing season on Dublin Gulch. He worked part of the Taylor ground under a lay agreement, and recovered only 123.13 fine ounces of gold.

K. Djukastein and J. Sandanger continued to prospect on a placer lease on Johnson Creek. They reported encouraging results.

WHITEHORSE DISTRICT

Activity in placer prospecting increased during the year. An interesting discovery was made on Arch Creek, a tributary of the Donjek River, and 2 one mile prospecting leases were located by Messrs. W.L. Drury and R.O. Davis. The samples contained coarse and jagged gold, and were recovered from a section of the creek where gold had not previously been found. A new discovery was also made on a small unnamed creek on the right limit of the Aishihik River just below Otter Falls. Forty-five new claims were staked, and 70 claims were renewed.

Gold recovered from the district during the year totalled 1,635.83 ounces, significantly more than the 1,066.48 ounces of gold recovered in 1956.

Burwash Mining Company, and the operation on ground held by T. Kabanak were active on Burwash Creek during 1957. Burwash Mining Company recovered 1,003.75 fine ounces of gold. The Versluce operation on Sugden Creek was also active during the year. Gold production from the various creeks was as follows.

Burwash Creek	1,183.37 ozs.
Sugden Creek	385.61 ozs.
Miscellaneous	66.85 ozs.
Total	1,635.83 ozs.

CHAPTER 19.

MINERAL INDUSTRY OF YUKON, 1958

INTRODUCTION

Information on the mineral industry in Yukon in 1958 was compiled from reports by F.H. Collins, Commissioner, G.A. McIntyre, Mayo Mining Recorder, and the Whitehorse Mining Recorder. Additional information was obtained from publications of the Emergency Gold Mining Assistance Act.

LODE MINING

Lode prospecting activity increased slightly in 1958 over the previous years. Prospecting crews were fielded by Newmont Mining Corporation, Prospectors Airways, Canadian Exploration Limited, Asbestos Corporation, United Keno Hill Mines, and Yukon Consolidated Gold Corporation, Limited. Several individual prospectors were also active. No new finds of economic importance were made, although some of the prospects warranted further investigation.

Lode prospecting in the Dawson District was active, although few new claims were staked. Evaluation and development of the asbestos deposit at Clinton Creek continued. Some prospecting and development work was done in the Mayo area by individual prospectors. United Keno Hill Mines, Limited was the only company engaged in mining in the district during 1958. There was a slight increase in prospecting activity in the Whitehorse District during the year. Underground development work at Canalask Nickel in the White River area was curtailed in April 1958.

There were 110 new lode claims recorded, and 450 claims were renewed in the Dawson District. There were 478 claims in good standing at the end of the fiscal year. In the Mayo District, only 53 new claims were recorded, and 448 claims were renewed. There were 1,113 quartz claims, and 391 quartz leases in good standing at the end of the fiscal year. There were also 32 new iron claims staked in the Mayo District during 1958. There were 599 new claims recorded, and 484 claims were renewed in the Whitehorse District during 1958.

Production from lode mining operations in the Elsa-Keno Hill area during 1958 totalled 34,284.5 tons of concentrate containing 23,377,311 pounds of lead, 6,866,755.6 ounces of silver, 18,709,331 pounds of zinc, and 228,082 pounds of cadmium. All of it was produced by United Keno Hill Mines Limited. The company produced slightly less concentrate in 1958 than in 1957, but it contained 3% more lead, and 19.5% more silver, with only a negligible decrease in zinc and cadmium contents. A small additional tonnage of high grade ore may have been mined by laymen.

A bulk sample of 602 tons of asbestos ore from Clinton Creek was shipped to Cassiar, B.C. for mill testing.

Yukon Coal Company continued mining at their Carmacks area Tantalus Mine, but production figures were not reported by the available sources.

DAWSON DISTRICT

Although little claim staking was done in 1958, there was considerable lode prospecting and development work done in the district during 1958. Most of the claims staked in 1958 were staked over areas which had been staked in 1957, but were not kept in good standing.

Peel Plateau Exploration Company, Limited continued its oil exploration in the Peel and Porcupine River areas in 1958.

Cassiar Asbestos Corporation, Limited acquired 16 more claims in the Clinton Creek area, bringing the total number of claims in the area under their control to 92. Development work on the property during the 374 days from October 15th, 1957 to October 21st, 1958 was done in three adits. The Snowshoe Adit advanced 1,189.5 feet, the Porcupine #1 Adit advanced 3,769.0 feet, and the Porcupine #2 Adit advanced 279.0 feet. The fifteen employees, who worked a total of 1,774 shifts, completed a total of 5247.5 feet of tunnelling.

From the whole operation, 5.6 tons of asbestos samples from open cuts and 596.4 tons of asbestos samples from the adits were sacked and shipped to Cassiar, B.C. for mill tests. Operations closed for the winter at Clinton Creek on October 31, 1958. More adits were planned at Clinton Creek. Company officials stated that the Clinton Creek operation looked promising, and had every likelihood of developing into a mine. At the end of the 1958 season, 5,000,000 tons of ore averaging about 6% asbestos of varying grade fibre had been outlined on the property.

Asbestos Corporation Limited held 68 claims in the Clinton Creek area adjoining properties controlled by Cassiar Asbestos Corporation, Limited but did no development on them during 1958.

Thirty-two claims covering an asbestos occurrence on the hill immediately east of Dawson were held by individuals. The Yukon Consolidated Gold Corporation, Limited which had been interested in the 32 claims as well as its own 12 adjoining claims, allowed its 12 claims to lapse. No work was done in the area during 1958.

The 24 claims controlled by Canadian Exploration Limited, on Mickey Creek, a tributary of the Fortymile River opposite Clinton Creek, expired during 1958. No development work on the claims was reported.

Asbestos Corporation, Limited optioned 32 claims on Shell Creek from Messrs. Hans and Werner Krause in 1957, as well as staking four adjoining claims. They carried out exploration work on the claims from June to September in 1958. Approximately 800 feet of trenching involving the removal of approximately 500 cubic feet of broken rock was done, the geology was mapped in detail, and dip needle surveys were done. The work allowed a preliminary estimate of the grade and tonnage of mineralization on the property to be made.

The claims covered an iron deposit, which graded from 5% to 50% iron in magnetite rich beds from a fraction of an inch to several feet in thickness. The magnetite rich beds were interstratified with chlorite schist and phyllite. The iron-bearing formation was from a few feet to 700 feet thick, and could be traced for about five miles along strike. The magnetite-rich beds constituted up to 30% of the unit.

Assessment work was done during 1958 on the 15 claims covering a bornite occurrence on Gold Bottom Creek. The 16 claims on the ridge between West Gold Bottom Creek and Carmacks Fork, covering another copper prospect, all lapsed during the year.

Mr. J. Sestak continued to hold 8 claims covering an asbestos occurrence on Thomas Gulch, and a few claims on a fluorite deposit at the mouth of Matson Creek. No work was done on either property in 1958.

The 16 claims which covered an asbestos prospect in the Woodchopper Creek area lapsed. Other claims were staked in the area in 1958, but no development work was reported on the new claims.

Only assessment work was done in 1958 on 4 claims covering a silver-lead prospect at the mouth of Miller Creek. The 40 claims staked in 1957 in the Miller Creek area over what was thought to be a nickel prospect expired.

About 20 claims on the right limit of the Yukon River approximately 25 miles downstream from Dawson were held by various individuals. The vicinity was called Silver City, as it had been restaked many times because of a silver prospect found many years previously.

Messrs. Charles Rivers, Stanley Rivers, Adolphe Coulombe and T.A. Retallack staked 32 claims in the vicinity of the head of the Fifteenmile River in June 1958. Prospectors Airways, Limited carried out a brief investigation of the property. Ore found in various outcrops was found to contain copper, silver, a trace of gold and siderite.

MAYO DISTRICT

Several companies including United Keno Hill Mines, Limited, Yukon Consolidated Gold Corporation, Canex Aerial Exploration Limited, and Prospectors Airways fielded prospecting parties in the Mayo District during 1958. No claims were recorded as a result of their work. Little prospecting was done in the Galena and Keno Hills areas during the year, although most companies with properties in the area continued to hold them. United Keno Hill Mines, Limited was the only company engaged in mining in 1958. It purchased the assets of Galkeno Mines, Limited and began to incorporate workings on the Galkeno property into its mining developments on adjacent properties.

United Keno Hill Mines, Limited

United Keno Hill Mines, Limited completed another successful year during 1958. The main underground work was done at the Hector, Calumet and Elsa Mines. Development work was done at the Jock, Keno and Galkeno Mines. Ore reserves decreased slightly during the year. Not including those at the Onek Mine on Keno Hill, or those at the Galkeno Mine, reserves at the end of September, 1958 totalled 587,940 tons with an average grade of 36.65 ounces of silver per ton, 6.59% lead and 5.53% zinc. Reserves at the Onek Mine were 133,491 tons averaging 10.27 ounces of silver per ton, 4.4% lead and 13.0% zinc.

At the Hector Mine, 441 feet of ore averaging 33.9 ounces of silver per ton across an average width of 5.6 feet were developed during the year. The major part of the ore was in the southern extension of the No. 3 and 4 veins on the 650, 775 and 990 levels.

Lateral development in ore at the Calumet Mine totalled 939 feet averaging 37.9 ounces of silver per ton across an average width of 5.7 feet. Of this total, 175 feet was developed on the 100 level in the No. 15 vein zone, and averaged 42.2 ounces silver per ton across an average width of 6.6 feet. Ore shoots were also developed in the No. 1 vein structure on the 775, 900 and 1,040 levels. They totalled 155 feet grading 40.1 ounces of silver per ton across 5.2 feet, 205 feet averaging 44.3 ounces of silver per ton across 5.8 feet, and 243 feet averaging 32.1 ounces of silver per ton across 5.4 feet respectively.

Minor work was done on the 100 level adit of the Galkeno Mine during 1958. Further rehabilitation, development and mining were planned. The company was considering using the adit to drain the lower levels of the adjacent Hector and Calumet Mines and to thereby aid in the development of ore bodies at depth on Galena Hill. Exploration work in the Hector Mine was going on, on the 1025 level, but the 1150 level was too wet to work.

Lateral development was continued at the Jock Mine, to investigate ore possibilities south of the Hector Mine. The advance along the vein structure returned low assay values of below ore grade.

Exploration work in the Elsa Mine gave encouraging results. The ore bodies encountered were erratic, but very high in grade. Development work included deepening of the shaft, and the establishment of the 650 and 775 levels. Lateral development was started on the 650 level to check the downward continuation of the 525 level veins. Much of the development work on the 525, 400 and 350 levels was directed to the area north of, and in the footwall of the Porcupine Creek fault. Veins developed were irregular, mainly flat lying, and returned some spectacular assays. Development was proceeding to determine the vein continuity between levels.

During the summer season, the No. 9 vein at the Keno Mine was drifted north on the 200 level to its limit. The work added 84 feet of ore averaging 35.9 ounces of silver per ton across 5.7 feet to the reserves. The south face on the 200 level was still in ore when work was suspended in the fall. The 300 level was collared and driven off the winze, and a drift was driven north and south on the No. 9 vein. The work outlined 213 feet of ore averaging 47.7 ounces of silver per ton across an average width of 5.7 feet. The south face on the 300 level was also still in ore when operations were suspended in the fall. Limited development was done on the No. 3 and 8 veins and on the "Main Break" but showed only irregular mineralization which was below ore grade. At the end of September, the 700 level adit was collared 500 feet vertically below the 200 level to check the downward continuation of the No. 9 vein. The crosscut was advanced 87 feet, and was being continued.

No work was done at the No Cash, Bermingham, Onek, Shamrock and Ladue Mines in 1958.

The tonnage milled at the Elsa concentrator was increased by nearly 10% during the year, while the average grade of ore produced was slightly lower than in 1957. Recoveries in flotation concentrates were reduced due to the larger percentage of oxidized ore treated. The cyanide plant put into operation in mid-March, 1958 boosted overall silver recovery about 5% for the fiscal year ending September 30, 1958 compared with the previous fiscal year. During the year ending March 31, 1959, 174,540 tons of ore were mined, from which 34,284.49 tons of concentrates were produced. The concentrates contained 6,866,755.58 ounces of silver, 23,377,311.2 pounds of lead, 18,709,330.8 pounds of zinc, and 228,082.06 pounds of cadmium.

During the year, the company purchased 41 claims. The total number of claims owned or held under option by the company in the Galena Hill - Keno Hill area was 578 claims. Two placer claims were also held.

Geophysical test work followed by surface stripping and diamond drilling was done on selected areas of Galena and Keno Hills. During the summer, exploration was also carried out in the area northwest of McQuesten Lake, but nothing of interest was located.

The company had an average of 509 employees during the year.

Other Lode Operations

E.H. Barker and associates retained their ground opposite the mouth of Dublin Gulch, and on Iron Rust Creek. Prospecting of the claims was continuing through surface stripping and trenching. Other operators in the Dublin Gulch, Secret Creek and Highet Creek areas retained their claims. A few claims were being retained on Lynx Dome, and 24 claims were being held on Rambler Hill.

No claims were held on showings known on Stand-to Mountain. G. Dickson allowed his claims covering the main showing of the base metal prospect at Kathleen Lake to lapse. The claims covering a copper occurrence on Zebra Mountain in the Wernecke Mountains were also allowed to lapse.

The group of claims staked in 1957 by R.L. McKamey over a copper occurrence near the confluence of the Bear and Wind Rivers lapsed, and was restaked by R.S. MacDonald et al.

A new group of 32 iron claims was staked on Slats Creek. Reports describing the mineralization on the property ranged from "nothing but hematite stain" to "65% iron, and lots of it". Yukon Consolidated Gold Corporation, Limited examined the iron deposits briefly during the summer.

Ventures Claims Limited took over the 22 quartz leases formerly held by Beaver River Silver-Lead Mines Limited on MacKay and Silver Hills in the Beaver River area, and the 8 quartz leases formerly held by Beaver River Silver-Lead Mines Limited on Alverson Gulch, Mount Cameron. No work had been done on any of the claims for 10 years.

Bankeno Mines, Limited continued to hold 18 quartz leases on Keno Hill. The company remained inactive throughout the year.

Bibis Yukon Mines, Limited continued to hold its 7 quartz leases near Faro Gulch on Keno Hill, but did no work of any kind on the property during 1958.

Comstock Keno Mines, Limited continued to hold 11 claims on Keno Hill, but was inactive during the year.

Consolidated Bellekeno Mines, Limited held 15 quartz mining leases on Sourdough Hill. The company did no work during 1958.

Jersey Yukon Mines, Limited continued to hold 40 claims on Galena Hill, but remained inactive during 1958.

Mount Keno Mines, Limited held 32 claims in the Lightning Creek area. J.B. O'Neill worked one of the old adits in 1958, under a lease arrangement with the company.

Alex Smith sank a shaft on his galena showing on the Elsa-Keno Road with encouraging results.

John Strebchuk prospected his promising showing at Corkery Creek on the Mayo-Elsa road.

Northwest Explorations, Limited allowed its seven claims at the head of Parent Creek to lapse in 1958.

Yukeno Mines, Limited which suspended operations in 1953, continued to hold 130 claims in the area, mostly on Keno Hill. The decrease in the number of claims held in 1958 compared to the number held in 1957 resulted from the sale of 8 claims to United Keno Hill Mines, Limited.

WHITEHORSE DISTRICT

There was a slight increase in prospecting activity in the Whitehorse District during 1958, although development work was curtailed. Lode gold deposits appeared to be of interest to those involved in mineral exploration, while base metal deposits were not sought as actively as they had been in previous years. The 1957 drop in market prices of base metals undoubtedly influenced the trend away from base metals exploration to precious metals exploration.

The underground development work being carried out by Canalask Nickel Mines, Limited on their property at the White River was curtailed in April 1958. The company had completed a 350-foot vertical shaft below the adit level, and had just begun lateral development work when the work was halted.

Silver Standard Mines, Limited acquired claims next to the Brown-McDade mine on Victoria Mountain, and carried out some geological investigations on the property.

Newmont Mining Corporation fielded prospecting parties in several areas. Scattered occurrences of mineralization were located, but none was of economic importance.

Dale Mountain Mines, Limited (Camera Developments) suspended operations at its lead-silver property near Mile 706, Alaska Highway.

Canadian Exporation, Limited did prospecting in the Nahanni and Dezadeash areas. The asbestos occurrence near Haines Junction previously held by Bell Asbestos Corporation was optioned by the company. Work on the property during 1959 was planned.

Conwest Exploration Company, Limited continued work in the Ketza River area, where they had located a lode gold occurrence.

Prospectors Airways had prospecting parties working in the Tay River and Coal River areas in 1958. Although mineralization was found, the occurrences were not considered to be of economic interest.

Ventures, Limited made an aerial reconnaissance of the St. Elias Range during 1958.

The Yukon Coal Company continued mining at its Tantalus Butte Mine near Carmacks.

PLACER MINING

The total amount of gold recovered in the territory in 1958 on which royalty export tax was paid was 83,960.7 ounces produced as follows: 80,336.9 ounces, Dawson District, 1,015.6 ounces, Mayo District, and 2,608.2 ounces, Whitehorse District. Total production decreased 9.5% over the year earlier. Gold production of Yukon Consolidated Gold Corporation was virtually the same in 1958 as in 1957, but the decrease in total production over the year meant the company produced 65% of all the placer gold recovered in the territory during 1958.

There were 57 claims staked or restaked during 1958, and renewals for 2,150 claim years were granted. Some of the renewals were for several years, so fewer than 2,150 claims were involved There were at least 1,409 placer claims in good standing at the end of the fiscal year.

DAWSON DISTRICT

Placer mining activity continued at approximately the same level in 1958 as in 1957. Three new claims were staked, and 39 claims were restaked in the district in 1958. The large number of renewals issued, 1,989, reflects the renewal of some claims for periods of more than one year. There were 1,223 placer claims in good standing at the end of the fiscal year, compared with 1,262 claims one year earlier. There were also four hydraulic claims in good standing in the district.

The water supply in 1958 was plentiful for all operations due to the very wet summer weather. Gold production during the year was 80,336.9 ounces, or 8,667.5 ounces less than the 1957 production. The decrease was almost completely attributable to a cutback in operations at Yukon Placer Mining Company's properties on Glacier Creek.

Yukon Consolidated Gold Corporation, Limited

The company operated dredges Nos. 4, 6, 8, 9, 10, 11 and 12 on Bonanza, Lower Dominion, Lower Sulphur, Upper Sulphur, Middle Dominion, Hunker and Jensen Creeks respectively, during 1958. The dredging season extended from April 25th to November 18th. A total of 6,130,347 cubic yards of gravel and bedrock was dredged, from which approximately 48,450 ounces of gold valued at $1,652,195.00 were recovered. The recovery rate from the material dredged was approximately 0.011 crude ounces of gold per cubic yard, valued at 26.85 cents.

The hydraulic mining operation on Paradise Hill, on the left limit of Hunker Creek was continued in 1958. In addition, a bulldozer sluicing operation on Dominion Creek was begun by the company during the year. A total of 479,923 cubic yards of material was processed at the two operations. Approximately 6,480 ounces of gold valued at $220,928.00 were recovered. The combined recovery rate at the hydraulic and bulldozer operations was approximately 0.018 crude ounces of gold per cubic yard, valued at 46.04 cents.

The maximum number of employees during the year was 374. Mining conditions were quite favourable. The weather was warm, and there was an adequate supply of water at all times.

Yukon Placer Mining Company

Yukon Placer Mining Company worked on its Glacier Creek properties from April 20th to September 15th, 1958. The company's 3.75 cubic-foot bucket-line dredge did not operate during 1958. The open-cut mining operation was worked with two D-8 Caterpillar bulldozers, and two pump units. Approximately 225 fine ounces of gold and 40 fine ounces of silver valued at $7,932.43 were recovered. Production during 1957, when the dredge was working and the open-cut operation was larger, was much higher, and totalled 8,637.01 fine ounces of gold and 1,574.23 fine ounces of silver with a gross value of $290,489.08. Mining conditions were good during 1958. It was a wet season, and the water was used for stripping ground. Yukon Placer Mining Company, which was formed by the same partners as formed Ballarat Mines, Limited had 4 employees during the season.

Other Placer Operations

Messrs. H.C. and D.F. Boutillier mined on Adams Gulch, Bonanza Creek from March 10th to October 1st using a bulldozer, and hydraulic methods. They recovered 318 ounces of gold.

Mr. B. Bratsberg operated from May 15th to September 29th on hill claims on Hunker Creek, using one D-8 Caterpillar bulldozer and sluices. He had one employee throughout the season. They recovered 775 ounces of gold.

Messrs. Wm. Hakonson and H. Hanulik operated with two employees on Lovett Gulch, Bonanza Creek, from April 1st to August 31st. They used two D-6 Caterpillar bulldozers, one 175 H.P. diesel pump, and a 45 H.P. booster pump, and recovered 359 ounces of gold. Their water supply was good all season.

Messrs. Hakonson, Hanulik, and G. Shaw also carried out assessment work, and ground preparation work for mining in 1959 on their property on Eureka Creek. The work was done between August 31st and September 30th.

Mr. J. Bremner, his son I. Bremner, and one employee carried out hydraulic mining on their Last Chance Creek bench property from April 15th to October 31st. They recovered 270.79 fine ounces of gold, significantly more than they usually recovered, due to the exceptionally good water supply all season.

Mr. R.S. Gould and his son J.A. Gould mined on Nugget Hill, Hunker Creek, from April 15th to October 5th. They used hydraulic methods to process 12,000 cubic yards of material from which they recovered 187.45 fine ounces of gold.

Northern Placers, Limited did not operate during 1958. A.T. Fry and his son D.A. Fry did not mine during 1958, and brothers M.D. and L.G. Cole also carried out no mining during the year.

Messrs. J.R. Colbourne and E. Schink mined from April 15th to September 25th. These partners had two operations during the year, and each man ran one using a bulldozer and sluices, without other employees. Mr. Schink mined on Gold Bottom Creek, and Mr. Colbourne mined on Paradise Hill, Hunker Creek. They recovered approximately 800 crude ounces of gold during 1958. The water supply was good all season at both operations.

Adolphe and Alcide Coulombe did not mine during 1958.

Ballarat Mines, Limited mined on their property on "Groetscher Bench" on Klondike Hill opposite Dawson in 1958. Work on the property began April 20th. Sluicing began May 10th, and ended September 25th. A crew of five worked using two D-8 Caterpillar bulldozers, one D-4 Caterpillar bulldozer, and a conveyor to feed the sluice boxes. They recovered 2,968.32 fine ounces of gold, and 548.67 fine ounces of silver with a total gross value of $101,007.44.

Mr. L. Ross and two employees mined on properties on Kirkman Creek, and nearby Ballarat Creek leased from Ballarat Mines, Limited. They worked with two D-8 Caterpillar bulldozers and sluice on Kirkman Creek from April 13th to August 18th, and worked with the same equipment on Ballarat Creek from August 18th to October 11th. They recovered 217.04 fine ounces of gold. While the water supply was good, gold recovery was affected by ice and frost which hampered stripping, and by the presence of only fair values in the ground mined.

J.P. LaCross, and two employees hired on an intermittent basis, mined on Quartz Creek from May 1st to September 1st. He recovered 322.99 fine ounces of gold, and carried out stripping in preparation for mining in 1959.

Mr. O. Lunde worked alone on his Dominion Creek property from April 20th to September 17th. Using one D-6 Caterpillar bulldozer, a 10 X 8 diesel pump, and sluices, he recovered 176.76 fine ounces of gold. His water supply was good throughout the season.

George Fant and Ivor Norbeck continued to mine on the Left Fork of Clear Creek during 1958. They worked alone, with one TD-18 International bulldozer, and sluices, and recovered 217.35 fine ounces of gold. Their water supply was good all season. The low gold recovery resulted from poor values in the ground mined. The partners prospected ground on Hunker Creek late in 1958, with a view to moving their operation to Hunker Creek from Clear Creek in 1959.

Mr. O. Medby continued to work on Hydraulic Lease # 46, held by T.R. Campbell, on Miller Creek during 1958. He used bulldozer and sluicing methods, and processed approximately 11,000 cubic yards of material, from which about 200 fine ounces of gold were recovered. The material processed contained approximately 0.022 crude ounces of gold per cubic yard, valued at 62.5 cents. The water supply at Miller Creek was exceptionally good in 1958.

Mr. J. Lamontagne, formerly a partner of Mr. Medby, mined with one employee on Bedrock Creek during 1958. They operated from April 15th to September 30th, using two D-6 Caterpillar bulldozers. They mined an area of 71,000 bedrock square feet, and recovered 765 ounces of gold. Approximately half the season was used to prepare ground for mining in 1959. The water supply was good all season.

Mr. J. Sestak and 5 employees mined on Ten Mile Creek, near the mouth of the Sixtymile River, using three D-6 Caterpillar bulldozers, sluices, and two small pumps. They operated from April 11th to October 5th, and recovered 223.43 fine ounces of gold valued at approximately $8,000.00. Water was so plentiful during the season that the operation was hampered at times by flooding.

MAYO DISTRICT

Placer mining activity in the Mayo District decreased in 1958, when the district's largest placer mining operation did not resume its activities during the summer. Placer production during 1958 was 1,015.6 ounces, or less than half the 1957 production of 2,193.2 ounces. Four new claims were staked in the district in 1958, and 72 claims were renewed. There were 86 claims in good standing at the end of the fiscal year.

Waddco Placers Limited did not operate on Haggart Creek during 1958, after having a less than successful season in 1957. The company moved its equipment out of the Mayo District during 1958.

Fred Taylor recovered 340.25 fine ounces of gold from his Dublin Gulch property in 1958. He considered this recovery poor, but expected his gold recoveries to increase as his operations moved upstream over the years.

Clifford Greig mined on his own ground on Dublin Gulch during 1958, after working in previous years on ground leased from Mr. Taylor. He recovered 268.55 fine ounces of gold, which he also considered poor.

Mr. E.C. Bleiler began operations on Highet Creek during the summer, and recovered 83.20 fine ounces of gold. Mining was done by hydraulic methods. Mr. Bleiler was required to do considerable preparatory work prior to commencing mining.

K. Djukastein worked on placer leases held by himself and J. Sandanger on Johnson Creek, and recovered 248.31 fine ounces of gold.

F. Taylor prospected a lease on Duncan Creek. Other work was done on Duncan Creek by several United Keno Hill Mines, Limited employees who were no doubt inspired by an article in the Saturday Evening Post describing placer mining as a hobby in California. To their surprise, they recovered several ounces of gold. Several claims were staked, and some of the Sunday miners planned further work in 1959.

WHITEHORSE DISTRICT

There was a continued interest in placer mining and prospecting throughout the Whitehorse District during 1958. Eleven new placer claims were staked, and 89 claims were renewed.

Gold recovered in the district increased from 1,635.83 ounces during 1957 to 2,608.17 ounces during 1958.

Burwash Mining Company continued their operations on Burwash Creek, and recovered 1,334.02 fine ounces of gold. Other operations were active on Bullion and Shorty Creeks. Gold production was as follows.

Burwash Creek	2,057.90 ounces
Bullion Creek	393.23 ounces
Shorty Creek	13.31 ounces
Miscellaneous	142.73 ounces
Total	2,608.17 ounces

CHAPTER 20.

MINERAL INDUSTRY OF YUKON, 1959

INTRODUCTION

Reports by J.D. Dines, Dawson Mining Recorder, G.A. McIntyre, Mayo Mining Recorder, and E.W. Emery, Whitehorse Mining Recorder, and publications of the Emergency Gold Mining Assistance Act were used in compiling information on the mineral industry in Yukon in 1959.

LODE MINING

Lode prospecting activity decreased in the Dawson District during 1959. The number of claims staked, and in good standing dropped significantly, although development work was done at the Cassiar Creek property of Cassiar Asbestos Corporation Limited. In the Mayo District, limited prospecting was done. Essential representation work was done on claims in the Galena Hill and Keno Hill areas. Silver production from United Keno Hill Mines, Limited reached an all time high. Development work and mining continued at several properties in the Mayo area during the year. A slight increase in lode prospecting occurred in the Whitehorse District in 1959, but little primary development of properties was done. Johobo Mines, Limited shipped a small amount of ore from its Dezadeash Lake area property.

A new organization known as the "Yukon Chamber of Mines" was incorporated at Whitehorse to replace the existing organization operating under the name of "B.C. - Yukon Chamber of Mines". That group was being confused with the Vancouver organization of the same name, with which it was in no way affiliated.

There were only 6 new lode claims recorded in the Dawson District, leaving 234 claims in good standing at the end of the fiscal year. In the Mayo District, 89 new claims were recorded, and 455 claims were renewed. There were 1,039 claims, and 447 quartz leases in good standing at the end of the fiscal year. The 32 iron claims staked on Slats Creek in 1958 were allowed to lapse in 1959. There were 659 new claims recorded, and 63 claims were renewed in the Whitehorse District during the year.

Production from lode mining operations in the Elsa-Keno Hill area during 1959 totalled 30,738.5 tons of concentrate containing 22,024,197 pounds of lead, 7,189,373 ounces of silver, 15,281,540 pounds of zinc, and 189,758 pounds of cadmium. All of it was produced by United Keno Hill Mines Ltd. The company produced 10% less concentrate in 1959 than one year earlier. It contained less lead, zinc, and cadmium than the 1958 concentrate, but contained 5% more silver for a record high production of that metal. A small additional tonnage of high grade ore may have been mined by laymen.

Yukon Coal Company continued mining at their Carmacks area Tantalus Mine, and recovered 3,977 tons of coal.

DAWSON DISTRICT

Little prospecting work, and little claim staking were done in the district during 1959. More than half the claims in good standing during 1958 were allowed to lapse. These included claims covering asbestos occurrences on the hill immediately east of Dawson City, and the bornite occurrence on Gold Bottom Creek. Asbestos Corporation, Limited allowed its 68 claims adjacent to the holdings of Cassiar Asbestos Corporation, Limited in the Clinton Creek area to lapse, although it kept 4 claims in the Shell Creek area in good standing. The company also kept its option on 32 claims held by Messrs. H. and W. Krause on an iron prospect at the head of Shell Creek. No work was done there in 1959.

Oil exploration was continued in the Peel and Porcupine Rivers areas in 1959. Western Minerals found oil with their Chance No. 1 well at Eagle Plain.

Cassiar Asbestos Corporation, Limited continued to hold or control 80 claims in the Clinton Creek area, and 42 claims in the Cassiar Creek area. No work was done on the Clinton Creek property during 1959. Early in March, a crew of about 17 men began moving buildings and equipment from the Clinton Creek property to the Cassiar Creek property. Development work was done over 92 days at the Clinton Creek property. The employees worked 1,338 man-shifts, and completed 1,179.3 feet of tunneling. The No. 1 west drift was driven 530.5 feet. The No. 2 west drift was driven 401.5 feet. The No. 3 south cross-cut was driven 247.3 feet. No ore samples were shipped. Operations were closed for the season on August 31st. There was no indication of the company's future plans for its properties.

Messrs. C. Rivers, S. Rivers, T. Retallack, and A. Coulombe held 26 claims over a copper-silver property at the head of the Fifteenmile (Chandindu) River. Only assessment work was done on it in 1959.

Various individuals continued to hold ten claims over the ruby-silver prospect approximately 25 miles downstream from Dawson, on the right limit of the Yukon River. No work was done on the property in 1959.

A few other claims, scattered across the District were kept in good standing in 1959. Most covered old prospects.

MAYO DISTRICT

A number of field parties prospected in the Mayo District during 1959. Sunshine Mining Company was active in the area from break-up until fall. Canex

Exploration Limited had one employee in the area year-round, with a second employee working during the field season. It was reported that the company planned considerable work on the "Duncan" property, on the left limit of the head of Gambler Gulch on Keno Hill.

During the winter of 1959-60, Amerada Oil Corporation had a winter truck road built from a point on the Mayo-Keno road to Bell Basin. The contractor who built the road stated that contrary to previous reports, Braine Pass was no obstacle, as the road was built on gravel terraces well above the creek bed. Gravel was readily available for surfacing at least as far as the Little Wind River.

United Keno Hill Mines, Limited

United Keno Hill Mines, Limited had a particularly successful year in 1959. Silver production reached an all-time high of 7.3 million ounces, compared to 5.9 million ounces in 1958 (company's fiscal years). The increase was due to high grade ore mined from the Elsa Mine. It totalled 28,082 tons averaging 79.05 ounces of silver per ton. Silver production for 1960 was expected to exceed that of 1959, as the grade of ore being recovered early in 1960 was higher than ever, especially the ore from the Elsa Mine. Lead production in 1959 was only slightly lower than in previous years. Zinc and cadmium output were moderately lower.

At the Hector Mine, development work in 1959 was limited. A 77 foot section of ore grading 47.4 ounces silver per ton over an average width of 7.0 feet was opened on the 900 level on the No. 1 vein.

The major part of the ore developed in the Calumet mine was in a new vein zone called the No. 18, on the 650 level, north of any previous mine working. The vein zone showed a continuous length of ore over 500 feet long on this level. Raise development during the last three months of 1959 proved continuous ore to over 115 feet above the 650 level. The ore body was also cut and developed on the 400 level. Development was being pushed on the 775 level to check the downward continuation of the vein.

Total lateral development in ore in the Calumet mine amounted to 1,076 feet grading an average of 43 ounces of silver per ton over an average width of 6.3 feet. Ore developed on the No. 1 vein structure on the 400, 525 and 1,040 levels, showed ore lengths of 97 feet averaging 38.0 ounces silver per ton, over 5.3 feet, 66 feet grading 48.7 ounces per ton over 5.5 feet, and 248 feet averaging 45.9 ounces silver per ton over 6.2 feet respectively. On the 1,165 level, drifting on the strong No. 1 vein structure showed a very short oreshoot of 21 feet averaging 30.6 ounces silver per ton over 6.0 feet. Most of the balance of the advance on the vein showed massive zinc mineralization which contained low silver values and did not make ore.

Late in the year an adit was started from surface between the Calumet and Galkeno mines to cross-cut a vein indicated on the surface at the approximate projection of the No. 18 vein zone in the Calumet. This cross-cut was advanced 150 feet. It was at the same elevation as the 650 level in the Calumet, and was 3,000 feet to the north. It was planned to pick up the vein in the adit cross-cut and then drive south on the vein while concurrently driving north on the No. 18 vein on the 650 level in Calumet

Limited lateral development was continued in the Jock mine on the 650 and 1,040 levels to test the southerly extension of the No. 3 vein, but no ore was found.

In the Elsa mine, lateral development in ore amounted to 1,142 feet which graded 65.7 ounces silver per ton over an average width of 6.4 feet. Of this total, development in the steep-dipping structure on the 525 and 650 levels opened up oreshoots totalling 220 feet grading 70.4 ounces silver per ton over 7.5 feet, and 164 feet averaging 51.2 ounces per ton over 6.6 feet respectively.

Development by inclined sub drifts established continuity of ore from the 200 level to just above the 400 level, along a slope distance of 295 feet. The ore had an average grade of 60.7 ounces silver per ton, across an average width of 5.7 feet. Below the 400 level, diamond drilling and development indicated the probable extension of the ore to the 650 level.

At the Keno mine, the 700 adit cross-cut was advanced 2,420 feet during the year and cut the Porcupine vein and the No. 6 vein at distances from the portal of 1,401 and 2,458 feet respectively. The Porcupine vein showed as a strong structure but carried no values at point of intersection. The No. 6 vein showed fair mineralization, and drifting on it returned 35.7 ounces silver per ton across an average width of 5.9 feet for a length of 10 feet. Further drifting on the No. 6 vein gave scattered values which were below ore grade. Limited development was done at the end of year on a narrow vein in the footwall of the No. 6 vein. It had not been established as being the No. 9 vein, or a footwall split off the No. 6 vein.

Driving was resumed in the Galkeno mine on the 900 level adit, which had been advanced 1,036 feet by previous owners. Timber repair and rehabilitation of the adit was completed and the adit advanced 911 feet. Work was planned for 1960 to check downward projection of the Sime and McLeod veins. Rehabilitation of drifts on the 100 and 300 levels was also done. A small program of development done during the summer above the 100 level produced 379 tons of ore grading 55.9 ounces silver per ton. Further development work was planned for 1960.

No work was done during the year on the Onek, Shamrock, Lucky Queen, Ladue, Bermingham and No Cash properties.

Of the 173,477 tons of ore milled during the company's fiscal year, 54,141 tons (31.21%) came from the Hector mine, 90,745 tons (52.31%) from the Calumet, 28,082 tons (16.19%) from the Elsa, and the balance of 509 tons (0.29%) came from development and cleanup in the Galkeno mine. The cyanide plant treated 142,840 tons of flotation tailings for a recovery of 490,994 ounces of silver. This compares with treatment of 80,834 tons in the company's previous fiscal year, for recovery of 287,205 ounces of silver. Overall silver recovery by flotation and cyanide was 95.5% in 1959, up from 92.82% in 1958.

During the year ending March 31, 1960, 176,860.0 tons of ore were mined, from which 30,738.53 tons of concentrates were produced. The concentrates contained 7,189,373 ounces of silver, 22,024,196.8 pounds of lead, 15,281,539.7 pounds of zinc, and 189,757.60 pounds of cadmium.

Seven claims were staked and twenty-one claims purchased in 1959 to bring the total owned or held under option by the company in the Galena Hill-Keno Hill area to 607 quartz and 2 placer claims. During the summer 45 claims were surveyed. It was planned to continue this work during the summer of 1960.

The company had an average of 531 employees during 1959.

Other Lode Operations

E.H. Barker and associates continued to hold their ground opposite the mouth of Dublin Gulch and on Iron Rust Creek. Surface stripping and trenching were done during the year. The group had also done a great deal of surface work with a bulldozer on its 50 claims on Dublin Gulch. The property covered gold-scheelite-tin prospects reported on in various government publications.

A few claims were retained in good standing on Lynx Dome. C.D. Poli maintained his property on Secret Creek, but only essential representation work was done. John Hawthorne continued to hold his claims in the Highet Creek area.

No claims were held on the old properties on Stand-to Mountain. Showings on Rambler Hill were relocated by J.B. O'Neill, R.L. McKamey, and Pete Versluce. They staked 24 claims. Eight quartz mining leases on Mount Cameron at the head of Alverson Gulch were maintained in good standing by Ventures Claims Limited. The company also held twenty-two leases on Silver and McKay Hills in the Beaver River area. No work had been done on any of the company's leases for more than a decade.

Gordon Dickson restaked the main showing of the base metal property near Kathleen Lakes. He had allowed earlier claims staked on the property to lapse in 1958. The property lay just 10 miles east of the Amerada Oil Corporation winter road.

Bankeno Mines Limited continued to hold 18 quartz leases on Keno Hill. The company was inactive in 1959.

Bibis Yukon Mines, Limited continued to hold its 7 quartz leases near Faro Gulch on Keno Hill, but did no work on the property during the year.

Comstock Keno Mines Limited held eleven claims on Keno Hill. J.B. O'Neill had a lay on the Gold Star claim, and was reported to have mined, but not shipped, several tons of high-grade ore.

Consolidated Bellekeno Mines, Limited held 15 quartz leases on Sourdough Hill, but did no work on them in 1959.

Jersey Yukon Mines Limited held 40 claims on Galena Hill. The company did only essential representation work during 1959.

Mount Keno Mines, Limited held 25 claims in the Lightning Creek area. J.B. O'Neill had a lay on the property, and took out some ore, but he did not make any shipments of it.

Alex Smith continued work on his property on the Elsa-Keno road with good results. John Strebchuk continued to prospect his showing near Corkery Creek on the Mayo-Elsa road.

Messrs. C.D. Poli and A. Smith optioned their Leo-KPO property to Peteal Company, which in turn transferred the option to two individuals. Diamond drilling was done in 1959, but core recovery was poor, and the project was terminated ahead of schedule by an early fall. Intentions were to resume the work in 1960. The program was under the direction of A.E. Aho.

Yukeno Mines Limited, which suspended operations in 1953, dropped 40 claims in 1959. It continued to hold 90 claims, mostly on Keno Hill.

WHITEHORSE DISTRICT

There was a slight increase in prospecting activity in the Whitehorse District during 1959. New claims were staked in the Kluane, Whitehorse, Frances Lake, Sheldon Lake, Quiet Lake, Carmacks, Dezadeash, and Flat River areas. Precious metal and base metal deposits were both targets of exploration work.

Of the claims recorded during the year, 133 were located in the Dezadeash area. Johobo Mines Limited shipped 750 tons of bornite ore from its 33 claim property in that area, for export from Haines, Alaska. Canex Exploration Limited optioned a group of 45 claims south of the Johobo property for work in 1960. In 1959, Canex Exploration Limited did 3,296 yards of trenching on an asbestos property situated just east of Haines Junction.

There were also 133 claims staked in the Carmacks area during 1959. Considerable activity was seen in the area during the year. Ormsby Mines Limited planned to move in a small mill to commence production on their 32 claims, which they held under 21 year lease. Silver Standard Mines did a geophysical survey in the Mount Nansen area. Conwest Explorations staked new claims, and did a considerable amount of trenching prior to beginning planned diamond drilling in the Tinta Hill area. Consolidated Mining and Smelting also staked claims in that area.

In the Quiet Lake area, Canol Metal Mines Limited did additional staking, and drove a 1,050 foot tunnel from which 2,700 feet of diamond drilling were done. Conwest Exploration continued its exploration work in the Ketza River area, and did some diamond drilling. New claims were staked over a known asbestos occurrence near Big Salmon Lake. Another group of claims was staked in the bend of the Big Salmon River.

The Yukon Coal Company Limited continued their operations at the Tantalus Butte mine near Carmacks. Their production in 1959 was 3,977 tons of coal.

PLACER MINING

The total amount of gold recovered in the territory in 1959 on which royalty export tax was paid was 85,052.6 troy ounces produced as follows: 77,704.9 ounces, Dawson District, 2,880.2 ounces, Mayo District, and 4,467.5 ounces, Whitehorse District. Total production increased just 1% over 1958 production. Yukon Consolidated Gold Corporation recovered 52,600 ounces of gold in 1959, or 4% less than in 1958, as a result of the washout of a dam which prevented them from mining at their hydraulic mining operation during the year. The company produced 61% of all the placer gold recovered in the territory in 1959.

Data concerning placer claims in 1959 are incomplete, but do indicate that there were at least 1,477 claims in good standing at the end of the fiscal year.

DAWSON DISTRICT

Placer mining activity continued at approximately the same level in 1959 as in 1958. There were 1,277 claims in good standing at the end of the fiscal year, compared with 1,223 one year earlier.

While not as plentiful as in 1958, water was generally available in good supply throughout the district during 1959. Gold production during 1959 was 77,704.9 ounces, or 2,632 ounces less than in 1958.

Yukon Consolidated Gold Corporation, Limited

The company operated dredges Nos. 4, 6, 8, 9, 10, 11, and 12, on Bonanza, Lower Dominion, Lower Sulphur, Upper Sulphur, Middle Dominion, Hunker and Middle Dominion Creeks respectively, during 1959. The dredging season extended 199 days from May 1st to November 15th. A total of 5,914,586 cubic yards of gravel and bedrock was dredged, from which approximately 50,525 ounces of gold valued at $1,723,075.00 were recovered. The recovery rate from the dredging operations was approximately 0.011 crude ounces of gold valued at 29.13 cents, per cubic yard. Four stripping plants and two thawing plants were operated in 1959 in preparation for future dredging. Severe run-off during the spring, and abundant summer rainfall hampered stripping and thawing to some extent.

The severe run-off during the spring on Hunker Creek destroyed the dam used in connection with the company's hydraulic operation on Paradise Hill on the left limit of Hunker Creek, and prevented that operation from running in 1959. The dam was rebuilt late in the summer.

The bulldozer operation on Dominion Creek began in 1958 continued work in 1959. There were 120,650 cubic yards of material moved, from which approximately 2,075 ounces of gold valued at $70,989.00 were recovered. The recovery rate was approximately 0.021 crude ounces of gold valued at 58.93 cents, per cubic yard.

The peak number of employees during the season was 337.

Yukon Placer Mining Company

Yukon Placer Mining Company worked on its property on the Sixtymile River near the mouth of Glacier Creek from May 1st to September 16th in 1959. The company's 3.75 cubic-foot bucket-line dredge operated for 44 days, beginning on July 28th. The open-cut mining operation had a longer season. It consisted of 3 to 4 D-8 Caterpillar bulldozers, pumps, and sluice boxes. There was insufficient water for sluicing even though the summer was cold and wet. Production from both operations totalled 1,794.25 fine ounces of gold and 332.17 fine ounces of silver and was valued at $60,280.30. There were 10 employees during the 1959 mining season.

Other Placer Operations

Messrs. H.C. and D.F. Boutillier mined on Adams Gulch, Bonanza Creek, from April 1st to October 1st using an International TD-40 bulldozer, and hydraulic methods. They recovered 49.55 ounces of gold. Their water supply was good all season, but their production was down from the 318 ounces recovered in 1958 because of poor grade ground.

Mr. B. Bratsberg mined on Hunker and Gold Bottom Creeks from June 1st to September 15th. He used a D-8 Caterpillar bulldozer, and sluice boxes. He had one employee throughout the season. They had a very good water supply, and recovered 400 ounces of gold.

Eureka Creek Placers Limited, a partnership of Messrs. G. Shaw, W. Hakonson, and H. Hanulik did not mine on Lovett Gulch during 1959. They moved their operation to Eureka Creek, and worked there from March 15th to October 31st with 4 employees. They used one D-4 and one D-6 Caterpillar bulldozer, a pump, and sluices, and recovered 276.02 fine ounces of gold. Their water supply was good all season, but operations were hindered by the fact that a proper access road, and a bridge over the Indian River had to be built.

Messrs. J. and I. Bremner and one employee carried out a bulldozer and hydraulic operation on their Last Chance Creek bench property from April 15th to October 15th. They recovered 150.32 fine ounces of gold, and had a fair water supply all season.

Messrs. R.S. and J.A. Gould mined on Nugget Hill, Hunker Creek, from April 15th to October 15th, and recovered 73.62 fine ounces of gold. One D-4 Caterpillar bulldozer and sluices were used. The water supply was good all season.

Mr. A.T. Fry and one employee worked from April 20th to September 30th on Monte Cristo Gulch, Bonanza

Creek. They found the spring run-off water was too fast, and of little use. Although the water supply was good the rest of the season, only 30 ounces of gold were recovered. Most of the work done was to prepare ground for mining in 1960.

Messrs. J.R. Colbourne and E. Schink operated on Hunker Creek from April 24th to July 15th, and on Gold Bottom Creek from July 15th to September 30th. They used one D-7 Caterpillar bulldozer and a sluice box on Hunker Creek, and a D-8 Caterpillar bulldozer and sluice box on Gold Bottom Creek. They recovered approximately 150 ounces of gold from their first operation, and approximately 500 ounces of gold from their second. The water supply was fair all season in both areas.

Ballarat Mines Limited operated at Groetscher Bench on Klondike Hill opposite Dawson for approximately 30 days in late August and September of 1959. One D-8 Caterpillar bulldozer was used on a clean-up program to finish the area the company intended to mine on the property. There were 315.96 fine ounces of gold recovered. The company also mined on Dominion Creek. Work began May 1st, and continued until September 23rd. A full sluicing plant, one D-4 and two D-8 Caterpillar bulldozers were used until late August, when one of the D-8 bulldozers was moved to Groetscher Bench. There were 1,839.60 fine ounces of gold recovered. Ballarat Mines, Limited had 6 employees during 1959.

Mr. L. Ross and one employee worked on properties leased from Ballarat Mines, Limited during 1959. They mined from April 10th to August on Ballarat Creek, and from August to September 12th on adjoining Kirkman Creek. Using two D-8 Caterpillar bulldozers, and sluice boxes, they processed 80,000 cubic yards of material and recovered 174.97 fine ounces of gold. Their water supply was good all season, but work on Kirkman Creek was hindered by "glacier" ice and frozen ground.

J.P. LaCross did only ground preparation work on his Quartz Creek property during 1959. From mid-July to September 23rd, 20,000 cubic yards of material were stripped.

Mr. O. Lunde worked alone on his Dominion Creek property from April 1st to September 30th. Using one D-6 Caterpillar bulldozer, and a 12" X 10" pump and sluice box, he recovered 69.19 fine ounces of gold. His water supply was good all season.

Mr. and Mrs. G. Burgelman mined on Caribou Creek, a tributary of Dominion Creek, from April 1st to October 1st. They used a D-4 Caterpillar bulldozer, and sluices, and recovered 145.26 fine ounces of gold. They reported a good water supply all season. Some of the water used at their operation was pumped from Dominion Creek, and some was obtained from a mile-long ditch.

George Fant and Ivor Norbeck mined on Hunker Creek in 1959, after having prospected all winter. They used one TD-18 International bulldozer and sluices, and recovered 220.25 fine ounces of gold. Their production would have been higher except that they did not get their equipment moved from their former operation at Clear Creek until July 1st, and were able to mine only until October 1st. They reported a good water supply all season.

Mr. O. Medby continued to work on Hydraulic Lease # 46, held by T.R. Campbell, on Miller Creek. He mined with one employee from May 10th to October 1st using two D-6 Caterpillar bulldozers, and recovered 210.26 fine ounces of gold. He reported water was in short supply at Miller Creek during 1959.

Mr. J. Lamontagne and one employee worked on Bedrock Creek from April 1st to September 15th. They used two D-6 Caterpillar bulldozers, and recovered 900 ounces of gold. They reported that their water supply was good for the first part of the season, and fair for the last part.

Sestak Placers Limited did not work at its Ten Mile Creek property in 1959. There was also no work in the Clear Creek, Twelvemile (Chandindu) River, or Fortymile River areas during the year.

MAYO DISTRICT

Placer mining activity in the Mayo District continued at the level of 1958 during 1959, but production was up due to increased production by each of the operators. Royalty was paid on 2,880.2 ounces of gold in 1959, compared to 1,015.6 ounces of gold during 1958. Five new claims were staked, and 62 claims were renewed. There were 72 placer claims in good standing at the end of the fiscal year.

E.H. Barker mined for a short while on Haggart Creek during 1959, in between his hardrock prospecting ventures. He recovered 123.25 ounces of gold.

Fred Taylor continued work on Dublin Gulch. He recovered 886.80 ounces of gold.

Clifford Greig also mined on Dublin Gulch during 1959, and recovered 248.63 fine ounces of gold. His season was cut short when a rock fall crushed his leg.

Mr. E.C. Bleiler continued mining on Highet Creek during 1959. His operations were in ground that had been mined previously, but he increased his recovery from the 83.20 ounces of gold he got in 1958 to 108.5 ounces. He expected to get out of the previously worked ground during 1960.

K. Djakuastein and J. Sandanger incorporated as Bardusan Placers Limited during 1959. They continued to work on their Johnson Creek property, and had a very successful season. They recovered 777.25 ounces of gold.

Fred Taylor continued prospecting his lease on Duncan Creek. Weekend prospectors from United Keno Hill Mines continued to "hobby" mine on Duncan Creek during 1959.

WHITEHORSE DISTRICT

Interest in placer prospecting and mining continued during 1959. Ten new claims were staked, and 118 claims were renewed. There were also 16 leases covering 29 miles in good standing. There was considerable talk of re-opening old workings.

Gold recovered increased significantly from 2,608.2 ounces in 1958 to 4,467.5 ounces in 1959. The increase in production came from the new operation of Action Mining Company on Bullion Creek.

Messrs. P. Rojcewicz and J. LaCross of Alaska operated under the unincorporated name of Action Mining Company on Bullion Creek. Using a D-9 Caterpillar bulldozer, they recovered 2,938.95 ounces of gold during 1959.

Mr. H. Besner continued operating the Burwash Mining Company on Burwash Creek during the year. Mining with heavy equipment, the company recovered 953.24 fine ounces of gold.

Mr. W. Drury recovered 206.6 ounces from a trial mining run on his lease at Arch Creek.

Production from the various creeks is summarized below.

Arch Creek	206.60 ounces
Bullion Creek	2938.95 ounces
Burwash Creek	1231.55 ounces
Sheep Creek	1.15 ounces
Miscellaneous	89.27 ounces
Total	4467.52 ounces